SOUTH INDIAN TRADITIONS OF

KALAMKARI

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By Lotika Varadarajan

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The Perennial Press
Bombay

Painting from Tanjore. Weaver and his wife. Courtesy, India Office Library, London.

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By Lotika Varadarajan

NATIONAL INSTITUTE OF DESIGN

The front cover shows a large and intricate piece of Kalamkari painted on cotton in the 17th century. The dimensions of the original piece are 295.5 cm. x 212 cm. The designs are mainly architectural niches with floral pendants framing deities and other scenes.
The end paper shows, in full colour, the *Ratha Yatra* panel from the Kalamkari piece depicted on the cover.
Courtesy, Trustees of Prince of Wales Museum, Bombay.

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PREFACE

The publication by National Institute of Design of Dr. Lotika Varadarajan's research on Kalamkari traditions is an important step in the Institute's efforts of many years to activate a publication programme which can bring its design research activities to a wider public, and to work closely with specialists whose activities impinge on design training. One of the major hurdles in spreading design awareness in our country has been the inadequacy of published material. A great range of design documentation and research achieved on this campus over almost two decades still awaits publication. The Institute hopes that the release of Dr. Varadarajan's work will stimulate support for a series of publications which can assist not merely the design training on our own campus but help to spread these resources to institutions and individuals whose activities relate very closely to our own.

I would like to thank Dr. Varadarajan for the scholarship, patience and support which she has given to NID's faculty, students and staff during this long project. It has been made possible through the generous assistance of the All India Handicrafts Board, which has been the major source of strength to the Institute's craft research endeavours over many years. Ms. Helena Perheentupa, NID Chairman of Special Projects, has coordinated the entire project, which has provided important learning opportunities and experience for NID faculty and students who have been involved at several stages. Kum. Mala Sankalia and Kum. Padmini Tolat have made particularly useful contributions in this project.

Shri Mahendra Patel, Chairman of the Faculty of Visual Communication, NID, has designed this publication. In the initial stages, Shri Patel was assisted in layout design by his students Kum. Bela Kothari and Mookesh Patel. We are grateful to Shri R.V. Pandit of The Perennial Press and Shri K.S. Ranade of Bombay for their advice and assistance in production of this publication.

Ashoke Chatterjee
Executive Director
National Institute of Design

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INTRODUCTION

The subject of this monograph evolved from a project originally conceived as a joint venture to be undertaken by the National Institute of Design, Ahmedabad, and Farabi University, Tehran. Both institutions shared the common interest of seeking to know more about pre-industrial methods of preparing cotton cloths dyed in variegated colours and designs known as *kalamkari*, *pintado* or *chintz*. Kalamkari has been, and is still being practised in Iran and South India. It was hoped that by tracing kalamkari traditions in India and Iran, inter-cultural links between the two countries could be analysed in more concrete terms than is possible if literary evidence alone is taken into consideration. Because of the emphasis on the Iranian connection, it was decided to concentrate more on the Masulipatam region where the link with Persian market preferences constituted an important factor.

The National Institute of Design, Ahmedabad, requested me to work as Project Director. As Homi Bhabha Fellow, 1976-78, I had collected considerable material on the subject. A consultative visit was undertaken by me to Farabi University, Tehran and Isfahan, from 5th to 10th October, 1978. A common programme was chalked out during this visit. After the recent political disturbances in Iran all contact with the Iranian team has been lost. The National Institute of Design, Ahmedabad, decided, nonetheless, to go ahead with the project.

A few adjustments were made and there was a slight shift in emphasis. Two senior students of the National Institute of Design volunteered to work for the project, Kum. Mala Sankalia and Kum. Padmini Tolat. The study was now conceived in two phases. At the initial stage field investigations were to be conducted in the existing regions where traditional kalamkari is still being practised. These are the Masulipatam region in Andhra Pradesh, Kalahasti in the same state and Sickinaikkenpet in the Kumbakonam region of Tamil Nadu. Craft traditions, designs, motifs and techniques were to be given emphasis in this part of the study. Kum. Mala Sankalia concentrated on the Masulipatam region and Kum. Padmini Tolat made a study of Kalahasti and Sickinaikkenpet traditions and techniques. Since the making of *mathaji-ne-pachedi* is the only process in which kalamkari is practised in Gujarat, it was not considered feasible to include Gujarat in the area covered by the project.

The aim of the inquiry was no longer geared so much towards the tracing of Indo-Iranian cultural relations, as endeavouring to analyse how a craft-oriented enterprise could be made a viable economic activity in an increasingly industrialised environment. It was felt that a socio-economic survey conducted by trained social scientists would prove an important complement to the historical and craft-oriented investigations being carried out. Dr. K.V. Ramana, Head of the Department of Economics, Andhra University, Waltair, agreed to undertake this aspect of the study in coordination with the author.

Since the subject and methodology of the socio-economic survey would be different from the first part of the project, it was decided that the material collected at the initial phase would be prepared for publication without waiting for work on all aspects to be completed. When the material was being prepared for the press, an unexpected difficulty arose. It was feared that if rules pertaining to italicisation were to be strictly followed an inordinately large segment of the text would have to be published in italics. It was decided to use italics *only* when a particular word appeared for the first time.

In the present work, field investigations for chapters two and three were undertaken by Kum. Mala Sankalia and Kum. Padmini Tolat. Many of their photographs have been used as illustrative samples and techniques of production have been based on their documentation. Acknowledgements are due to many other individuals without whose help and cooperation this work would not have been possible. Smt. Jasleen Dhamija played a key role in the inception of the project. Ms. Helena Perheentupa, Chairman, Special Projects, National Institute of Design, Ahmedabad, ensured that there was smooth coordination of effort at all stages. Her sharp perception brought many problems into clearer focus. Kum. Mala Sankalia and Kum. Padmini Tolat have shown singular tenacity of purpose in course of their field investigations when they had to deal with vagaries of weather, unfamiliar environment, not to speak of problematic means of transport.

Shri K.V. Chandramauli of All India Handicrafts Board, Bangalore, freely made his vast knowledge in the field of vegetable dyes available, whenever there were doubts and queries. Shri T. Rafai, with his intimate local knowledge could provide much guidance about resource persons and craft centres in Andhra Pradesh. Special thanks are also due to the Weavers' Services Centres, Vijayawada and Madras, Prince of Wales

Museum, Bombay, Calico Museum, Ahmedabad, Shri V. Venkataswamy Naidu, Shri Anamkonda Nanchariah, Shri Rekhapalli Parthasarathy of Masulipatam, Shri P. Mukkantes-warudu of Polaveram, Krishna District, Shri Gourappa Chetty, Shri Munni Krishna, Shri C. Sankaraiah of Kalahasti and Shri S.M. Radhakrishna Naidu of Sickinaikkenpet. Shri L.K. Srinivasan (Archaeological Survey of India, Southern Circle), Dr. R. Nagaswamy (Director, State Archaeology, Tamil Nadu), and the late Shri Kora Ramamurthy, Madras, provided every help and encouragement. The author owes a special debt of gratitude to Shri N. Sethuraman of Kumbakonam whose indefatigable help and erudite knowledge of Pallava, Chola and Chera chronology provided valuable insight into the past history of regions where kalamkari was practised.

Lotika Varadarajan
National Institute of Design

Ahmedabad, October 1979.

CHAPTER ONE

The Pre-Modern Trading World of Asia

Silk Weaving Traditions

Indian Expertise in Silk and Cotton

Layout, Motifs and Colours

The Primary Artisan and Textile Production: Caste and Community in Gujarat and South India

THE PRE-MODERN TRADING WORLD OF ASIA

The Phoenicians are said to have been among the earliest group to have opened mercantile trade contacts in India at Gujarat. The great silk route linking Ceres to the West provided proven channels of communication. Physical barriers such as the Pamirs, the Himalayas and the forest terrain stretching from Burma to colonial period Indo-China had not become barriers of political geography. Mountain passes and river valleys were utilised to forge pathways of trade through each one of these inhospitable regions[1] . Belief in Jambudwipa could not negate the reality of intra-oceanic maritime enterprise. The contributions made by Persians, Arabs and Chinese in building up a repository of Asian navigational skills have been recorded. The achievements of Indonesian and Indian mariners fall into less defined spheres. There was an awareness of the nature of seasonal winds, the direction and flow of currents and periodicity of inclement weather and these were accepted as factors governing the course of maritime traffic. Passage by sea to set destinations followed known pathways. Vessels were so constructed as to take maximum advantage of the dynamics of wind, wave and swell.

Channels of communication by sea followed patterns of commodity exchange between different geographical units. The East African shore was prized for ivory and gold. The South Arabian coastline produced aromatic essences and coffee. Bahrain was known for its pearls. Persian silk, wine and rosewater were well-known while its silver *larin* formed a welcome constituent in the Indian pattern of bullion exchange. Persian and Arab steeds were much prized in Indian cavalry. Among spices, Malabar in India produced pepper, Ceylon had the best quality cinnamon while Indonesia enjoyed a monopoly in nutmegs, mace and cloves. Chinese porcelain found a ready market in Islamic kingdoms while Chinese silk enjoyed steady demand.

Indian textiles constituted an important item in this network of trade. Indian textiles were exported to Africa, Arabia and Persia. They played an important role in the spice trade, being accepted as a ready medium of exchange in the spice trade. Merchants throughout the region participated in this trade network but the maritime carrying trade was dominated by the Arabs, Chinese and varying groups of Indian sailing communities among whom Gujaratis receive particular mention.

[1] *See Bulletin of the Needle and Bobbin Club, Vol. 21, 1937, R.M. Riefstahl, "Notes on a study of trade routes of Central Asia".*

SILK WEAVING TRADITIONS

The term, Indian textiles, has been used above in a somewhat loose manner. From the point of view of external trade there were two primary regions where export quality Indian textiles were manufactured. These were Gujarat and the Coromandel/Golconda coast. Bengal was another sector, but in addition to textiles Bengal also exported food provisions. Bengal textile primacy lay in the export of a high quality textile, the fine *jamdani* associated with the Dacca region[2]. The importance of Bengal in the field of textiles appears to have been a late seventeenth century and an eighteenth century phenomenon and there is little material on its earlier pattern of trade. Before turning to the level of expertise attained in the manufacture of cotton it is of interest to trace traditions of silk manufacture in India.

Unlike cotton, silk is not directly of vegetal origin. It is derived from material secreted by certain insects in weaving their cocoons. The properties of the yarn and its colour are largely effected by the diet of the worm. Those feeding on the mulberry have been collectively classified as *Bombycidae*, while non-mulberry feeding worms are termed as *Saturniidae*. Commercially, the most highly prized silk is the *Bombycidae* because of its better dyeing properties. In antiquity China developed a rare mastery over both the rearing of the *Bombycidae* and the reeling of its silk. In about the first decade of the fifth century of the Christian era, a marriage alliance between a member of the Chinese royal family and that of Khotan brought with it the dispersion of silk weaving from China to Khotan. From Khotan sericulture spread to Yarkand, Farghana and Gilan. Once the monopoly over silk production had been broken, proficiency in weaving began to be built up. The Sassanian Empire achieved a high level in silk manufacture. The state religion of Zoroastrianism provided inspiration for much figurative design and it was not difficult for Christian Byzantium to absorb this. To the existing pool of expertise connected with silk, Byzantium added the dimension of dyeing with Tyrian purple. By 552 A.D. silkworms began to be bred at Byzantium and by 568 A.D. competence over the various processes connected with the manufacture of silk had been effectively demonstrated[3]. The strict monopoly maintained by the imperial workshops proved in the end deleterious to the development of the Byzantine tradition, but Sassanid expertise was absorbed by the Arabs and promoted throughout the Islamic Empire. In Europe an important centre developed in Spain[4]. Silk, like linen, had the property of being able to reflect light. It lent itself easily to a wide range of ornamentation through the twin media of dye and loom. Weaves such as brocade, tapestry, satin, damask, and velvet dramatically demonstrated the opulence of silk as a fabric[5]. Further variations could be introduced by the weaving of multiple cloths.

INDIAN EXPERTISE IN SILK AND COTTON

The level at which India participated in this rich heritage of silk weaving has yet to be effectively determined. This is an important point as it would serve to clarify the position occupied by silk as an Indian trade textile. The double *ikat* or *patola* of Gujarat shows that in the art of dyeing the Indian tradition had achieved a high degree of mastery, but weaving in this idiom was a relatively simple process although, admittedly, an arduous one. According to Shastric injunctions, silk has been accorded a ritually pure status. It is, therefore, undeniable that silk weaving was practised in India since very early times. The date for the introduction of the mulberry fed silkworm, however, is still a moot point. In this context, the distinction drawn in the *Arthasastra* between *kauseya* and *chinapatta* or *chinamsuka* is of some interest[6]. At an indeterminate point in time, mulberry silk rearing began to be practised in Bengal. The introduction of the mulberry silk industry in Karnataka is of late origin.

[2] *The cotton used for this was grown in an area about 40 miles in length and less than three in width along the banks of the river Megna, roughly 20 miles north of the sea. Attempts to grow this variety in other parts of the country failed. See* ***Reports and Documents connected with the Proceedings of the East India Company in regard to the Culture and Manufacture of cotton, wool, raw-silk and indigo in India****, London, 1836, p. 121.*

[3] *See* ***Ciba Review****, Vol. 43, Alfred Leix, "The Sassanid textiles and their influence on the western world", p. 1563.*

[4] *Granada and Seville were important centres. The design component of silk tradition established in Spain bore a strong impress of Islam. Sicily, Lucca, Florence and Venice showed a different tradition. Although derived from the Saracens, the tradition was, from the beginning, associated with Christian hagiology. Silk manufacture was introduced into Sicily by the Arabs after their occupation of the island in 827 A.D. Under the Norman King, the Christian, Roger II (1101-1154 A.D.), silk weaving spread to other centres in Italy and became associated with figurative motifs; ibid., Vol. II, 1938, A. Varon "Silk and the development of trade", p. 380; ibid., Vol. 27, 1939, Walter Reininger, "The Florentine Textile Industry of the Middle Ages", p. 165.*

[5] *Although associated with Damascus, the damask weave was first developed in China. Europe is, however, associated by one author with the highest developments in the medium of velvet. See Otto van Falke,* ***Decorative Silks****, London, 1936, p. 45.*

[6] *See* ***Journal of the Bihar and Orissa Research Society****, 1917, J.C. Ray, "Textile Industry of Ancient India", p. 218; A.N. Gulati,* ***The Patolu of Gujarat****, Museums Association of India, 1951, p. 2.*

From the first centuries of the Christian era certain centres of silk weaving had emerged. Ter in Maharashtra is mentioned as one such centre. Pratisthana or modern Paithan also appears to have played a focal role. At Paithan gold and silver coated thread was interwoven into the ground fabric by means of the interlocking or tapestry weave. During the medieval period, Gujarat emerged as a major centre for silk weaving. Curiously, until the impetus provided by European demand in the last quarter of the seventeenth century, Bengal was content with the role of silk producer, exporting much of its yarn for the consumption of the silk weaving industry based in Gujarat. Although some silk may have been woven in Banaras, during the medieval period this region was basically a cotton producing one. The silk industry started coming into prominence during the eighteenth century and appeared to be greatly influenced by traditions of silk weaving in Gujarat.

Inscriptional evidence dated to the Chola period[7] points to the presence of silk weavers at Kanchipuram, Tamil Nadu, at that time. The second traditional centre for silk weaving in this state was located at Kumbakonam. Techniques showed minor variation at these centres. In Gujarat there was evidence of the tapestry weave associated with Paithan, but there was also a vigorous tradition of brocade weaving by usage of the *jhala* or the drawloom. Ornamentation was introduced by means of the extra weft technique. Kanchipuram and Kumbakonam shared a common tradition but the Kumbakonam product was acknowledged to be cheaper and less durable than its Kanchipuram counterpart. This resulted from the use of untwisted yarn for the weft and a difference in the method used in the joining of the *pallu* portion to the main body of the sari. Both schools used the extra warp mechanism (the *jhungu*) for ornamentation of the sari borders. For ground decoration, however, the *adai*, a variation of the jhala, was utilised to weave portions adorned by extra weft.

From the beginning there appeared to be differences between Gujarat silk and South Indian ware. The flowing lines, multicolours (termed *minakari*), the twill brocade, the satin weave (*gajji* or *atlas*) of Gujarat were not duplicated in the South. Work in the latter region was heavier and lacked the Northern delicacy of outline. Moreover, whereas the borders and pallus of the Southern silk saris were usually of a contrasting colour, in the North variation tended to be introduced by means of the brocaded effect rather than by colour contrast. On the whole it can be stated that silk traditions of South India were less developed than those of the North, and that Indian tradition, taken in its entirety, showed a lesser degree of variation than the Sino-Islamic one. The major thrust of Indian exports lay in the direction of the circulation of its cotton fabrics rather than its silk ones despite the Indonesian market in patola and the Persian market in diaphanous wrought silk turban material and delicately woven *patkas*.

Unlike silk, cotton cultivation was dispersed over a wide geographical region, although the original home of the cotton plant may well have been located on the Indian subcontinent. Whereas silk had, from early times, been regarded as a sumptuary fabric, cotton had played a more utilitarian role. Certain categories of cotton could, however, be accorded the same status as silk. The nebulous jamdani and the fine dye patterned goods could be placed within this category.

Whereas the major difficulties associated with silk lay in the delicacy with which the yarn had to be handled during the reeling process to secure uniform thickness, those pertaining to cotton arose from the inherent difficulties associated with the bonding of dye to fibre. Before cotton fibre could absorb dye, it had to be treated with various substances so that the desired colouring ingredients could penetrate the fibre and be transformed into a permanently insoluble substance. This initial treatment of the cotton fabric prior to dyeing was known as the process of mordanting. Success in dyeing was, therefore, intimately connected with the degree of expertise achieved in the process of mordanting. It was because of Indian mastery over this process that the finished product enjoyed such superiority in trade.

LAYOUT, MOTIFS AND COLOURS

Basic techniques for the preparation of cotton did not show major variation apart from the fact that in Gujarat wooden blocks were used for stamping on the mordant whereas on the Coromandel/Andhra coast the transfer technique and the brush or pen were used for the same purpose. Each market had specific preferences in layout, motif and colour, and these had to be rigidly adhered to in order to ensure success in vending. Gujarati cottons were sold both in the African/Gulf regions as well as in Indonesia. The prime outlets for the Coromandel/Andhra cottons lay in the area then known as the Southern Seas comprising Malaysia, Indonesia and the Philippines. Where there was a common market, the Gujarati product would be very similar to that of the South-Eastern coast of India although some stylistic deviations would be present.

[7] *H. Krishna Sastri, ed. and trans., South Indian Inscriptions, Vol. III, Part III, Madras, 1920, p. 267. The inscription is ascribed to Uttama Chola (973-985 A.D.).*

One of the developments which took place during the seventeenth century was the shift in emphasis which took place from Gujarat to South India as the source for the supply of trade cottons. It has been found that there is a close link between canons of design displayed in textiles and the schemes of ornamentation associated with the decorative arts. The *bandhani (plangi)* designs of Gujarat find an echo in the trellis work in contemporary architecture. The *Al (Morinda citrifolia)* used in Gujarat for obtaining red did not yield the depth found in the Coromandel where *Chay (Oldenlandia umbellata)* was the preferred dye. Figurative chintz for which a European demand developed, represented an adaptation of techniques developed in the Coromandel for the fashioning of temple cloths with a strong narrative content. It is difficult to associate these with the west coast as has been done by John Irwin in his identification of the Burhanpur hangings[8].

Along the Coromandel/Andhra Pradesh coastline also, three sub-regions may be defined: around Masulipatam, around Pulicat and in the Tanjore region. The figurative panels which have been given a Sinhalese connotation on display at the Calico Museum, Ahmedabad, may be ascribed to the Tanjore school although some may well have been executed in the Jaffna region of Sri Lanka[9]. These assertions are based on correlations found between material remains and canons of textile design.

THE PRIMARY ARTISAN AND TEXTILE PRODUCTION: CASTE AND COMMUNITY IN GUJARAT AND SOUTH INDIA

Although references to different kinds of textiles may be found in many classical and medieval texts, very little is known about the primary artisan. This is perhaps inevitable viewed against the hierarchical structure inherent to contemporary society. European activities provided a fillip to textile production both in Gujarat as well as in South India. When, with the progress of the seventeenth century, orders for textile production began to be placed increasingly in the Southern sector in preference to the Western sector, this should have been accompanied by an acceleration in textile activity commensurate with demand. Since textile manufacture was deeply entrenched in the handicraft tradition, no major changes in technology could be expected. Increase in quantum of manufacture would be reasonably associated with an increase in work force. Since export oriented textile activity was localised to specific geographical regions, either one of two alternative movements can be expected to have taken place: either fresh batches of artisans would move to expanded centres of employment or there would be a shift from one occupation to another within the same region either on a seasonal basis or because of the prior existence of disguised unemployment.

Oral information based on bardic sources in Gujarat suggests the possibility of an influx of artisans from Sind into Gujarat during the sixteenth and seventeenth centuries. There is no evidence of a similar movement having taken place in the South. Oral tradition among the Saurashtra community in Tamil Nadu points to their migration to Tamil Nadu because of their skill in silk weaving, particularly in the field of brocade. Their migratory movements are associated with offers of court patronage, particularly those extended by Tirumala Nayak of Madurai (*circa* 1623-1659 A.D.) and Shahji of Tanjore (1684-1712 A.D.). Saurashtra may have contributed to the growth of Turkey red *chungadi* (plangi) dyeing at Madurai as also the weaving of *kutni* (*mashroo*—a fabric with a cotton weft and a silken warp woven in a satin weave), but these items were in demand among the privileged elite in the South and did not constitute export oriented items. The answer to the social response to increased textile demands in the South must be looked for in other quarters.

An understanding of the caste and community complexion of the textile producing group both in Gujarat as well as in South India are very essential. During the medieval period, the *Khatri* community, Muslim as well as Hindu, were virtually the only participants in textile production in Gujarat. Records of community genealogists—the barots—point to a dispersion from Sind. Gujarat was a centre of textile production from at least the tenth century. Extant samples found at Fostat in Egypt point to a connection with samples of *tiraz* workmanship[10]. More interestingly, Fostat samples can be linked with some designs found in Jaina illuminated manuscripts of Western India and those still current at existing craft centres, such as Javad and Bhairongadh (Madhya Pradesh), Mahua (Saurashtra) and Rajapur Deesa (Banaskantha District, North Gujarat).

[8] *John Irwin, Margaret Hall,* ***Indian Painted and Printed Fabrics****, Calico Museum of Textiles, Ahmedabad, 1970, pp. 79, 80 and coloured plate X, plates. 44, 45.*

[9] ***Ibid.****, coloured plate IX, plates 38, 42.*

[10] *Muslim nobles of the Caliphate period caused textile pieces intended for presentation to be manufactured in their own workshops. These places were called tiraz and would perhaps correspond to the* ***Mughal karkhana****. A new style was developed in these tiraz. Instead of human or animal figures, calligraphy in Kufic script, indicating the good wishes, or the invocation of a prayer by the donor, were woven into the fabric. The body of the fabric could be decorated by*

The traditional weavers in Tamil Nadu belong to the *saliya*, *sengunthar* (earlier known as *kaikkolar*), and *pillai (vellala)* communities. Oral testimony asserts that the weaving skill of these communities was not of a very high order. Telugu *padmasaliyas* are accorded higher recognition for their weaving skill, and this group, like the Saurashtras, are also *patnulkaran* (silk weavers). In the sphere of kalamkari or chintz, the members of the Telugu Naidu community predominate. This brings up several problems. Testimony of the Sangam classics points to the antiquity of resist dyeing in the Tamil Nadu region[11]. Joseph Brennig, in his doctoral dissertation entitled, *The Textile Trade of Seventeenth Century Northern Coromandel*, advances the credible view that the heartland of kalamkari tradition lay in the South Coromandel region[12]. Andhra had developed skills in weaving rather than in dye patterned cotton textiles. With the establishment of the Qutbshahi dynasty at Golconda, kalamkari traditions were transplanted to the northern coast of the Deccan. With the growing importance of Masulipatam as a centre of foreign trade, links with the Persian market increased in substantial measure. If it is accepted that the heartland of kalamkari tradition was located in Tamil Nadu, a further difficulty has to be resolved. According to present day craft traditions in Andhra Pradesh and Tamil Nadu, kalamkari activities, whether at Masulipatam, Kalahasti or Sickinaikkenpet, are monopolised by members of the Telugu Naidu community. It is difficult to synthesise the fact that members of a Telugu caste enjoy a virtual monopoly over the manufacture of kalamkari with the assertion that kalamkari traditions had been transplanted from Tamil Nadu to Andhra Pradesh.

An added distinguishing feature of communities involved with textile manufacture is the attempt at an upward social mobility in evidence both in Gujarat as well as in South India. In Gujarat, the *via media* is that of an invocation of the Parasuram myth to resolve the dichotomy between the practice of a lowly occupation with claims to a higher ritual status. Khatris in Gujarat claim to be of Kshatriya origin and state that it was fear of annihilation at the hands of Parasuram which compelled them to take to unlikely occupations like dyeing, weaving, block printing and tailoring. In Tamil Nadu where Kshatriyas, synonymous with Rajputs in the North, form a very small segment of the community, upward social mobility has assumed the form of claiming the status of Vishwakarma Brahmins. Claim to Kshatriya status does not involve the same extent of sanskritisation as is associated with claims to brahminical status. These attempts at upward social revision would not have occurred unless the economic status of the group had improved sufficiently to provide a viable basis for the advancement of such claims. This brings into play the economic role of the Sudras in Indian society.

geometrical or floral motifs, but this would be framed by the script which stylistically, would be the most important component. See ***Ciba Review****, Vol. II, 1938, A. Varon, "Silk and Style", p. 367; also E. Kuhnel, Louisa Bellinger,* ***The Textile Museum Collection Catalogue of Dated Tiraz Fabrics****, Washington, 1952, pp. 99, 100 and plate III.*

[11] *See* ***Nedunal-Vadai****, an early Tamil classic dated circa second century A.D.*

[12] *J.J. Brennig,* ***The Textile Trade of Seventeenth Century Northern Coromandel: A Study of pre-Modern Asian Export Industry****, Ph.D. dissertation submitted to the University of Wisconsin, 1975, pp. 21, 22.*

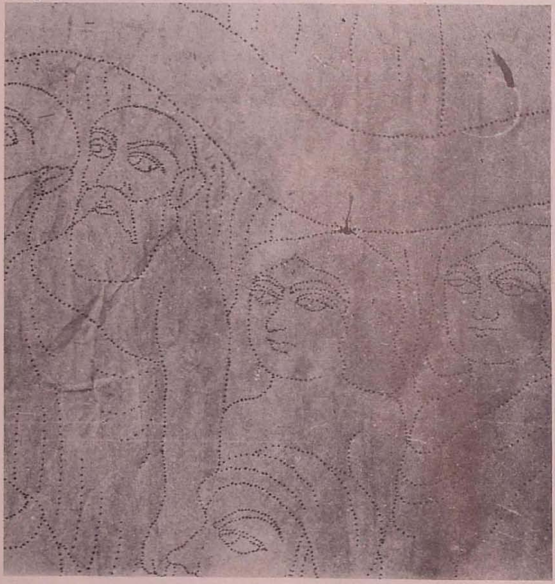
CHAPTER TWO

Historic Techniques and Processes

Early Market Orientation

Later Developments

Fig. 1.



HISTORIC TECHNIQUES AND PROCESSES

From the time when man switched over from bark, leaves and animal skin to woven fabric as a medium for the fashioning of costume, regional differentiation began to emerge as to the basic material in use. Climatic conditions in Russia favoured the utilisation of fur. Europe developed linen, wool and, at a later date, silk, in the Mediterranean region. In Egypt the greatest finesse was reserved for linen. The Chinese had a monopoly over the weaving and fashioning of silk for many centuries. This tradition then began to disperse at first through Central Asia to Persia, and then through the medium of Arab hegemony to Southern Europe. Silk yarn was, however, woven at various places long before the silk industries themselves were established. From early times, and this relates to other woven fabrics also, prized textiles procured from foreign sources would be unwoven and the yarn would then be fashioned anew. This was done with Chinese silk in the Roman Empire and Indian cottons on the East African coast.

Kalamkari related exclusively to the category of cotton fabric. It may be defined as relating to such fabrics as were patterned through the medium of dye rather than loom. Cotton was grown over a very large area from Syria in West Asia to the Indonesian archipelago and China in the East. There was at no time any question of a single country or region having a monopoly over the cultivation of the cotton plant in the same manner as China had managed to achieve in the sphere of silk. Ochre was one of the few colours which cotton would take on quite easily, but for a range of other colours the fabric had to be initially treated with mordants which set up a chemical reaction following which cotton fibres were able to absorb the desired hue. In India, a fragment of mordant dyed cotton fibre has been found in Mohenjodaro. This is a clear indication of the antiquity of mordant dyeing in India. Mordant could be uniformly applied over the entire fabric or it could be selectively applied thus yielding variations in colour on completion of the dyeing process. Mordant could be applied either with a block or with a brush/pen like instrument, the *kalam*, and this was affected on a prewoven fabric. The weave was always a simple tabby weave. The usage of these patterned cotton textiles would be linked to social practices. It could be used for decorative or functional hangings in domestic and monumental structures, as wrapping and covering material, or

Fig. 1. Workshop of Agha Giyahi, Isfahan. Perforated design worked out on tracing paper.

in costume. The degree of utilisation in costume would depend on climatic conditions and economic considerations such as that of marginal substitution. For the privileged elite, decorative appeal would form an important consideration in the choice of fabric. Thus, this category of fabric in India covered a whole range of textiles differing from the point of view of texture as well as pattern, the common feature being that of uniformity in method of dyeing.

The word kalamkari has its origin in the technique involved in the dyeing of woven cotton material. During the pre-industrial era when there was exclusive dependence on natural dyes, it was found that for cotton, a cellulose fibre, only two dyes provided reasonable depth and permanence of colour. These were indigo and madder. Usage of each was related to specific processes and techniques.

Indigo was obtained from the leaves of a shrub called *Indigofera tinctoria*. The extraction of the colouring material, *Indicum*, involved a complicated procedure. At the first stage *Indigotan* was separated from *Indiglucin* by a process of fermentation. Continued fermentation resulted in the further separation of indigo white from *Indigotan*. Indigo white was the material which provided the dye substance and it was only in this state that indigo could combine with cellulose fibre. On oxidation, indigo white was converted into granules of indigo blue. The commercial item sold for dyeing purposes consisted of coagulated granules of indigo blue retailed in the form of cakes. This had once again to be reduced by fermentation into soluble indigo white before dyeing could take place. The fabric would then be dipped into the prepared dye vat. After exposure to air, soluble indigo white would revert to the state of insoluble indigo blue, but by this time it would be bonded to the cotton fibre.

The nature of the dyeing process necessitated the practice of certain techniques. Since oxidation was a very rapid process, indigo could not be block printed. Although in Europe other methods were evolved whereby block printing with indigo became feasible[1], in India the only method in practice in Gujarat and the South was by means of submersion in the dye vat prior to oxidation. In the South, indigo was usually the last colour to be applied in the dyeing process and to prevent unwanted colour from permeating onto other parts of the fabric, these areas would be protected by some impermeable substance, the resist. Resists could be made from various substances such as combinations of gum and mud, or from wax. On the Tamil Nadu and Andhra Pradesh coasts, the preferred medium was wax. As the process was a cold one, immersion in the dye vat did not affect the consistency of the wax resist.

The second technique related to the use of madder for the red dye. Cotton in its natural state could not absorb madder. It had to be treated with certain substances before the dye could bond with the fibre and remain insoluble. The first stage was that of tanning. The cloth would be dipped in a solution containing tannin. After this mordants would be applied. When iron acetate was applied it would combine with the tannin to provide a black colour. This method for obtaining black was used only for the purpose of outlining the pattern. For larger areas a combination of indigo and madder, or deep indigo was preferred. For red colour, alum mordant was required. After application of alum, the cloth would be submerged in a heated dye vat containing madder. Madder would combine with alum to provide red, and contribute to fixing the black colour. Earlier treatment with tannin was required to enable alum to penetrate the fibres and ensure even permeation of dye.

The term kalamkari had its origin in the tools which the artisan used for the application of resist and mordant. If the resist used was wax, it had to be applied in a molten stage. During the medieval period in India it was uniformly applied by means of a brush like instrument called the kalam[2]. For the application of mordant two methods were in use: application by brush and application by block.

The choice of motif and fineness in execution played a part in the selection of brush or block as the tool to be used for the application of mordant. Blocks for the patterning of wool, linen and silk have been known since early times. Blocks were used for the patterning of silk in China as early as 100 A.D. The earliest block printed silk in Iran has been dated to the sixth century A.D.[3]. The samples of painted and printed textiles from Gujarat found in Fostat, or Old Cairo, dated to between the twelfth and the sixteenth centuries, show that block printing was being practised in Western India from at least the twelfth century[4]. There is a strong non-figurative

[1]*See Société Industrielle de Mulhouse, Bulletin Trimestrielle, No. 11, 1953, P.R. Schwartz, "Contribution à l'histoire de l'application du bleu d'indigo dans l'indiennage Européen", pp. 66, 74, no.8, 76, n.16; Ciba Review, 85, W.A. Vetterli, "The history of indigo", p. 3068.*

[2]*The kalam in India has remained the same over the years. Refer infra to plates figs. 175, 176 for contemporary depictions of the kalam.*

[3]*A. Buhler, E. Fischer, Clamp Resist Dyeing of Fabrics, Ahmedabad, 1977, p. 94; J. Gluck, S.H. Gluck, eds., A Survey of Persian Handicraft, Tehran, New York, London, Asiya, Japan, 1977, p. 86.*

[4]*Refer to forthcoming issue of Journal of the Indian Society of Oriental Art, Lotika Varadarajan, "Fostat Textiles—Tradition and Continuity".*

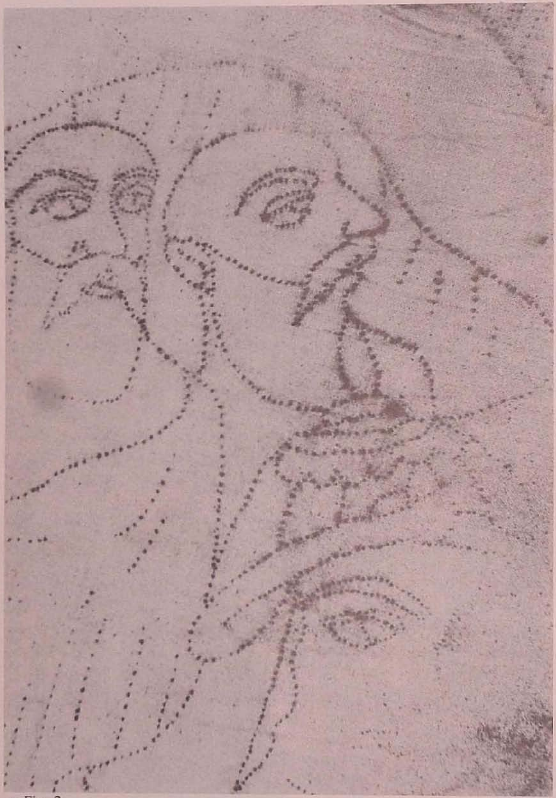


Fig. 2.

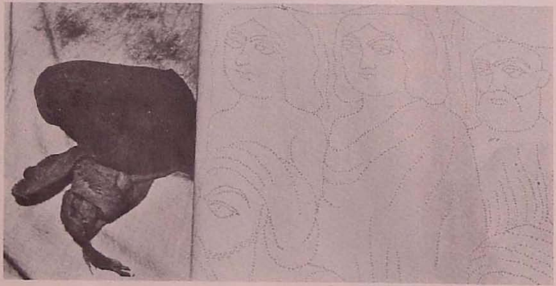


Fig. 3.

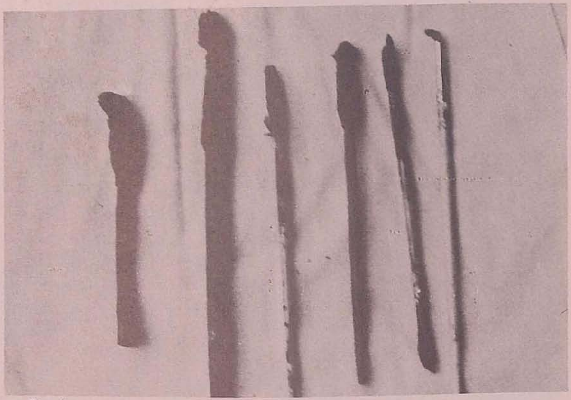


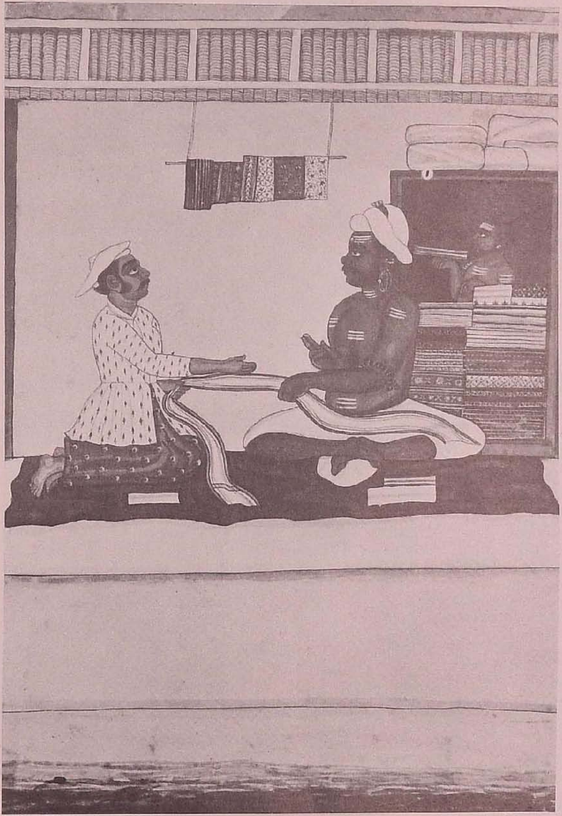
Fig. 4.

Fig. 5.

Fig. 2. Workshop of Agha Giyahi, Isfahan. Design as pounced onto the surface of the cloth.

Fig. 3. Workshop of Agha Giyahi, Isfahan. Muslin bag with charcoal dust shown in the plate is lightly rubbed along the perforated outlines of the tracing paper.

Fig. 4. Workshop of Agha Giyahi, Isfahan. Brushes used in contemporary Iranian kalamkari for painting of mordants. The thicker brushes are made of horse hair. These are not available commercially and have to be fashioned by the artisan himself. The finest one, made of cats' hair, available in the market, is used exclusively for calligraphic detail. These brushes may be compared with those in usage at Masulipatam and Kalahasti (see figs. 175, 176). While brushes may be used for the figurative part of the design, borders may be block printed.



← Fig. 6.

Fig. 5. Workshop of Agha Giyahi, Isfahan. Outlining with iron acetate on cloth which has already been treated with gall nut.

Fig. 6. Cloth merchant in shop selling chintz. Painted at Tanjore. Courtesy, India Office Library, London.

element in Fostat textiles, and this element has been a continuing feature in Gujarat printed ware until recent times. Moreover, workmanship is somewhat crude. If quality were not an important consideration, supply in bulk a necessary requirement, and repeats a constituent in the design layout, there were obvious advantages in usage of the block. This appears to have been a reason why it was advantageous for the Gujarat artisan to engage in block printing of mordant in local manufacture of textiles[5].

The tradition on the south-east coast was somewhat different. South Indian temples played a key role in the social and economic life of the people, and the figurative element is strong in items commissioned by temple patrons. The narrative panels in temple cloths made the brush rather than the block a more practical tool for the artisan. Andhra had a tradition of fine cotton weaving from early times[6]. This made more meticulous craftsmanship possible as delicacy in outline depended on the quality of cloth used. Europeans later gave the name *percale*[7] to the best quality of cloth used in Southern kalamkari, and this term persists in contemporary French to denote fine quality, printed furnishing material. Unlike Gujarat, therefore, on the South Indian coasts, the only instrument used both for mordant as well as for resist was the brush. Another departure from the Gujarat tradition lay in the fact that the sole medium for resist in commercial textiles was beeswax. A Tamil classic refers to the use of beeswax as early as the second century A.D.[8].

The term kalamkari in reference to Gujarat and South Indian dye patterned cotton fabrics came into usage after the link in trade with Safavid Persia had been established. The main outlet for the activity was associated with the port of Masulipatam in Qutbshahi Golconda. The earlier term, found in the *Mahabharata*, is *chitra vastra* meaning patterned cloths. There

[5] *Although Sironj and Burhanpur were known for their fine painted textiles, the Gujarat textiles exported from Cambay were, generally speaking, of a crude quality. See Armanda Cortesao,* ***The Suma Oriental of Tomé Pires and The Book of Francisco Rodrigues****, Kraus Reprint Ltd., Liechtenstein, 1967, p. 13; V. Magalhaes-Godinho,* ***L'economie de l'empire Portugais aux XVe et XVIe siecles****, Paris, 1969, pp. 248, 758; P. Blancard,* ***Maniel du Commerce des Indes Orientales et la China****, Paris, 1806, pp. 195, 239; Legoux de Flaix,* ***Essai historique, géographique et politique sur l'Indoustan avec un tableau de son commerce****, II, Paris, 1807, p. 282. For further details relating to the usage of the term kalamkari refer to* ***Homage to Kalamkari****, Marg Publications, Bombay, 1979, Lotika Varadarajan, "Towards a definition of kalamkari", pp. 19-21.*

[6] *See S.P. Reddi,* ***Andhra ka Samajik Itihas****, translated from Telugu by R.V. Rao, New Delhi, 1959, pp. 78, 147; M.S. Sarma,* ***History of the Reddi Kingdoms****, Waltair, 1948, pp. 387, 388.*

[7] *Blancard, op.cit., pp. 238, 239; L. Dermigny,* ***Cargaisons Indiennes****, II, Paris, 1959, p. 242.*

[8] *The work entitled* ***Nedunal-Vadai****.*

Fig. 7.

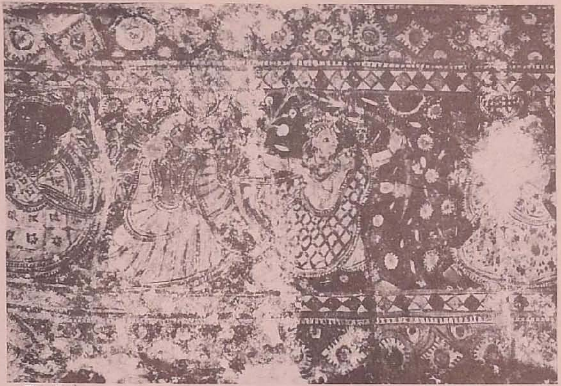
18

Fig. 7. Mural painting, Virupaksha Temple, Hampi, fifteenth century A.D. Courtesy, Archaeological Survey of India. Note the division of the surface area into sections, usage of the alcove effect and embellishment by means of floral, vegetal and architectural devices. The textile worn by the male deity in the central panel appears to be kalamkari.

Fig. 8. Mural painting, White Vinayaka Temple, Tiruvalanjoli. Nayak period. Courtesy, Archaeological Survey of India, Temple Survey Project, Madras. Note border patterns and fabric designs.

Fig. 9. Mural painting, White Vinayaka Temple, Tiruvalanjoli. Nayak period. Courtesy, Archaeological Survey of India, Temple Survey Project, Madras.

Fig. 10. *Circa* eighteenth century. Courtesy, Victoria and Albert Museum, London.



▲ Fig. 8.

▲ Fig. 9.

▼ Fig. 10.

do not appear to have been any terms either in Telugu or Tamil which specifically differentiated painted polychrome cottons from other monochrome dyed varieties or those ornamented on the loom. According to the *Mandalika Vrittipadakosam*[9], the Telugu term, *rangula addakam*, refers to colouring of yarn in several colours. The word addakam can relate to any kind of dyeing. It has no distinctive attribute of being painted. The term for block printing is *choppa pani*. Choppa is obviously derived from Urdu *chap* and must be of late origin. Temple hangings are called *ganga duppatlu* (goddess bedspreads). These would have figurative kalamkari, but the term used is suggestive of 'usage' rather than 'technique'. Tamil terms are equally diffuse. The term *pun-tukil vitanam*, related to canopies with a floral design. *Chittara-ceykai-padam* meant figurative work. The two terms in usage at Tanjore, *tanniral ezuthu* and *mezukal ezuthu*, writing with water and writing with wax, are descriptive rather than denominative. The Tamil and Telugu words for kalam, *turi* and *gantamu*, respectively, have not given rise to any definitions analogous in meaning to kalamkari or pintado. When the Europeans came, they coined their own terms. The medieval term *chint*[10], a vernacular term in usage in India, gave rise to the English chintz, the Dutch *sits* (painted) and *chits* (printed), the Portuguese pintado, the French *chitte* synonymous with *toiles peintes* (painted cloths) and *toiles imprimées* (printed cloths). It has to be remembered that until the early nineteenth century, any reference to 'printed' could be taken to mean chintz which had been manufactured in the North at centres like Patna, or on the West Coast in Gujarat.

Apart from India, the only other place where dye-patterned fabrics were made during the medieval period was Iran. In other regions such as Egypt, Turkey and Europe, where patterned fabrics were made in which cotton formed a component, the medium for colouration was pigment and not dye[11]. In Iran two traditions can be traced although the chronology is difficult to establish. During the sixteenth century, calico printers were called *chitsazi*[12]. There is also a tradition, and this is common to the field of embroidery, of what the

[9] *B. Krishnamurthy, ed., Mandalika Vrittipadakosam, A Telugu Dialect dictionary of occupational vocabularies, Vol. II, Andhra Pradesh Sahitya Akademi, Hyderabad, 1971, rangula addakam q.v.*

[10] *See Journal of the Bihar and Orissa Research Society, 1917, J.C. Ray, "Textile Industry of Ancient India", p.227; Journal of the Indian Textile Industry, IV, 1959, "Notes and Comments–The Etymology of Chintz and Pintado", p. 77.*

[11] *R. Pfister, Les Toiles Imprimées de Fostat et l'Hindoustan, 1938, p.81; T.F. Carter, The Invention of Printing in China and Its Spread Westward, New York, 1931, p. 248, n.12.*

[12] *A. and H. Landold–Tuller, Qalamkar–Druck in Isfahan, Basel, 1976-77, pp. 64-66, 69.*

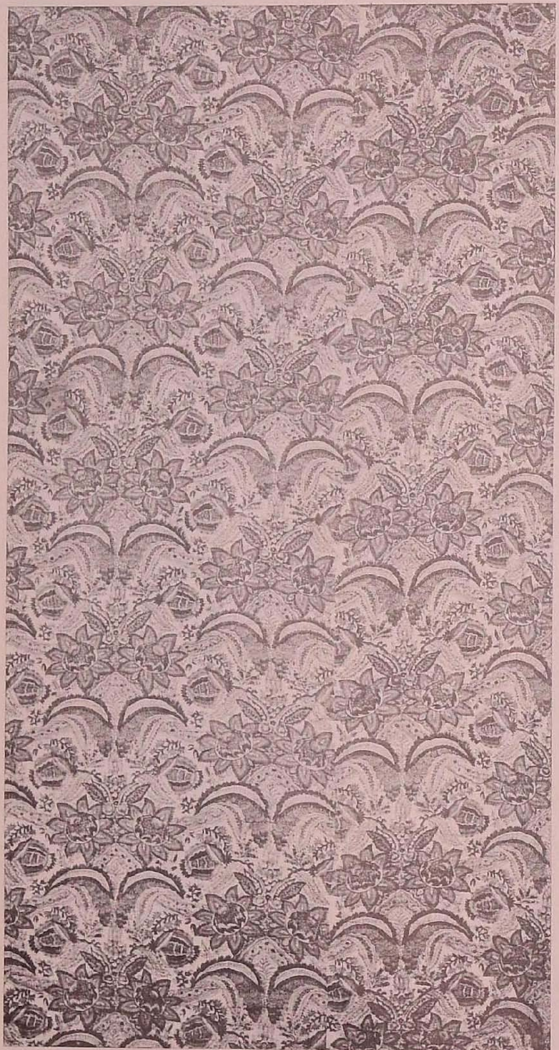


Fig. 11.

Fig. 12.

Fig. 11. End seventeenth century A.D. Courtesy, Rijksmuseum, Amsterdam.

Fig. 12. Eighteenth century. Courtesy, Rijksmuseum, Amsterdam.

Europeans referred to as the pouncing technique. The design was outlined on paper. Perforations were made (fig. 1). The outlines were then transferred onto the cloth by passing a bag containing charcoal dust over the outline (figs. 2, 3). After this, mordant and resist were applied with the kalam (figs. 4, 5)[13]. Artisans who used the kalam were called *kalamkars* as against block printers who were called *chitsaz*[14]. According to one tradition, Mahmud Ghazni is said to have taken back block printers with him after his incursions into north-west India, and it was in this way that block printing was introduced into Iran[15]. Whether the pouncing technique was practised prior to this date is not known. However, the dyers of Iran could not match the work of their Indian counterparts. Large quantities of chintz were imported into Iran from Gujarat and the South India during the seventeenth century, the southern ware being much more prized by the Iranian customer[16].

Some interaction appears to have taken place between Iranian traditions of kalamkari and those of the southern coasts. Extant traditions of kalamkari in the region show two techniques in practice. In the Masulipatam region, there is a virtually exclusive reliance on the block. At Kalahasti and Sickinaikkenpet, where temple influences are much more dominant, there is total reliance on free hand drawing, initially with a charcoal stick for the outlining of the pattern, followed by the reworking of the contours with kalam (see figs. 201, 203). European observers who documented Coromandel kalamkari techniques and processes in the eighteenth century refer to the practice of the pouncing technique[17] as in Iran. Today only one artisan in Masulipatam[18] carries a dim memory of the pouncing technique. The Kalahasti and Sickinaikkenpet technique appears to have been the original one in practice. The pouncing method was probably introduced from Iran during the Safavid period. While the practice of pouncing can be linked to embroidery traditions in Iran, no equivalent link can be forged in relation to South India, and it is for this reason that it appears to have been an innovation brought in from Iran.

European observers, moved by scientific curiosity and the desire to duplicate chintz in their own countries, minutely observed the various procedures associated with the fabrication of kalamkari. Even after the Industrial Revolution had effectively trounced hand-made ware in commercial markets, contemporary Europeans continued to note existing traditions, doubtless influenced by the craft movement started by William Morris in England in the late nineteenth century. There is, more or less, a continuous record of techniques of kalamkari and the various centres of this craft from the eighteenth century to the early twentieth century[19].

EARLY MARKET ORIENTATION

The subject which will now be taken up is that of the pre-industrial trade in kalamkari. Since each market had its own preferences, the range in design was extensive. Kalamkari design in existing centres has very set horizons in pattern. The Persian influence is preponderant in the Masulipatam region. The Kalahasti school works within a rigid framework of a stereotyped vision of Hindu iconography, while at Sickinaikkenpet innovation and renewal are made difficult by the fact that only one family is actively involved in the operation. If present practitioners are made aware of the richness and diversity of the earlier tradition, perhaps a more meaningful revival may be possible.

The development of kalamkari seems to have followed a certain pattern. Andhra Pradesh was well-known for its finely woven cottons to which the term jamdani[20] was given, thus betokening its similarity to the fine ware of the Dacca region. Silk weaving also appears to have reached a high level of attainment[21]. Although some kalamkari may have been made on

[13] *In India the kalam for application of wax resist had a metal tip unlike that used for application of mordant.*

[14] *Informant: Agha Giyahi, Bazaar–e–Davatgiarha, Isfahan. Agha Giyahi appears to be the only practitioner of the pouncing technique left in Isfahan today. For pouncing in embroidery see catalogue prepared by Jasleen Dhamija for Exhibition of Royal Iranian and Kashmir Termeh from the Collection of Rahim and George Anavian at Khaneh Aftab, November, 1976, p. 6.*

[15] *J.M. Papillon, Traité Historique et Pratique de la Gravure en Bois, Vol. I, Paris, 1766, p. 66.*

[16] *R. Pfister, op.cit., pp. 17, 18; G.P. Baker, Calico Painting and Printing in the East Indies in the XVII and XVIII Centuries, London, 1921, p. 37; N. Steensgaard, The Asian Trade Revolution of the Seventeenth Century, Chicago, London, 1974, p. 410.*

[17] *See J. Irwin, K.B. Brett, Origins of Chintz, London, 1970, Appendices A-C.*

[18] *Shri Vinakota Ranganaikul, working for the establishment of Anumkonda Nanchariah, Nizampet, Masulipatam.*

[19] *For earlier practices refer to work cited in note 16. For later techniques see E. Thurston, Monograph on the Cotton Fabric Industry of the Madras Presidency, Madras, 1897; W.S. Hadaway, Cotton Painting and Printing in the Madras Presidency, Madras, 1917; Journal of Indian Art and Industry, Vol. III, No. 27, E.B. Havell, "The Industries of Madras".*

[20] *For description of this ware see Legoux de Flaix, op.cit., II, pp. 116-120.*

[21] *S.P. Reddi, op.cit., p. 13; M.S. Sarma, op.cit., p.388. It is significant that in Tamil Nadu the local weaving communities were traditionally associated with the weaving of cotton. Telugu weavers, the padmasaliyas, were one of the groups involved in silk weaving.*

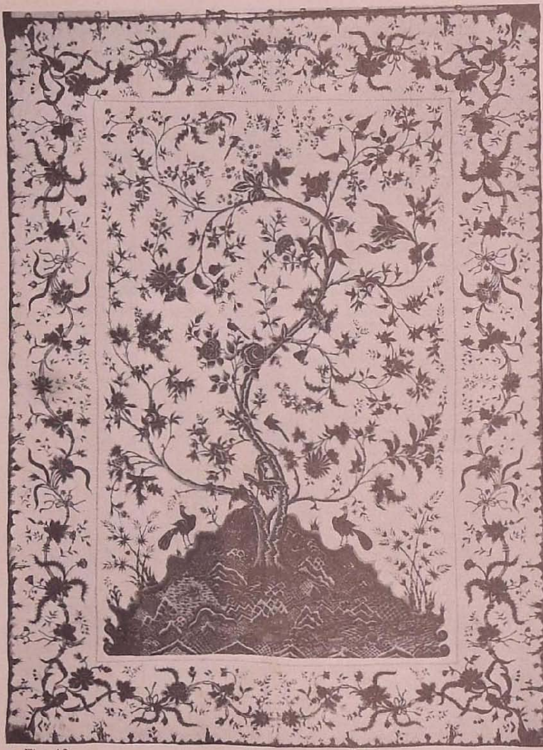


Fig. 13.

Fig. 14.

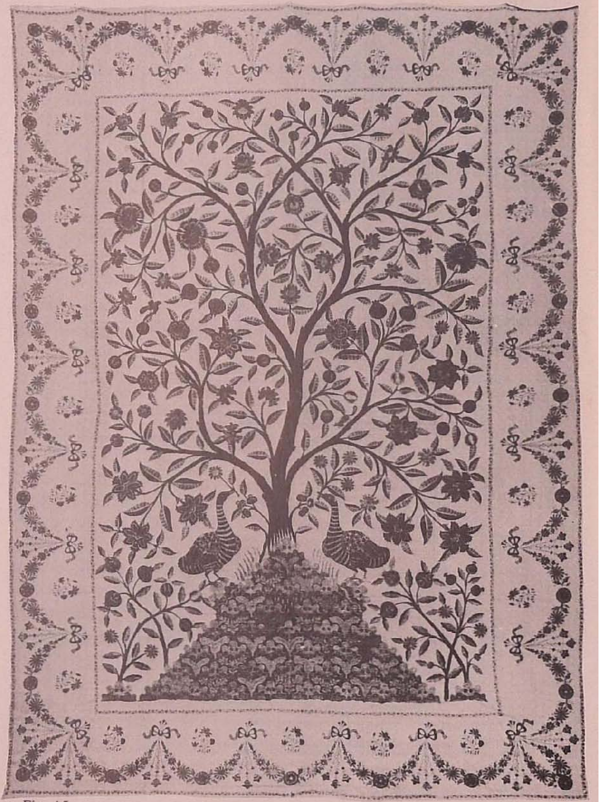
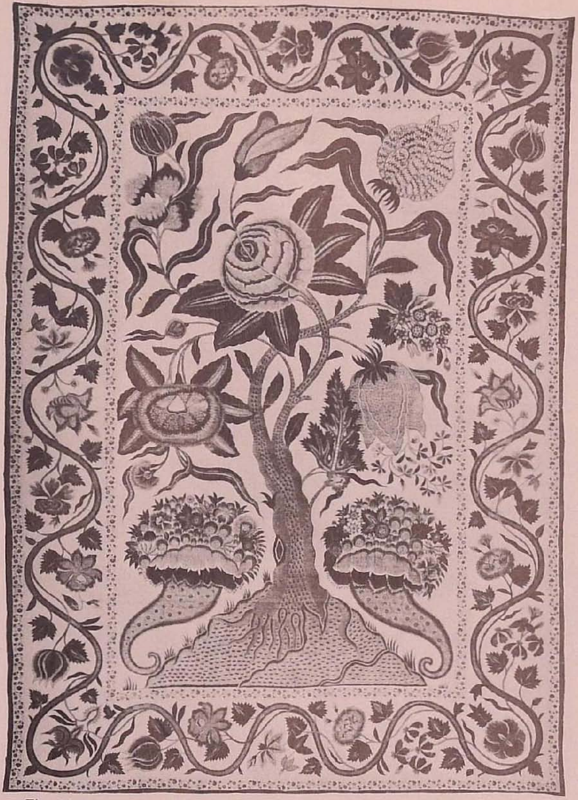


Fig. 15.

Fig. 13. *Circa* eighteenth century. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.

Fig. 14. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.

Fig. 15. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.



▲ Fig. 16.

Fig. 16. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten. Cf. John Irwin, K.B. Brett, *Origins of Chintz*, London, 1970, plate 19.

the Andhra Pradesh coast, the major centre for this activity can be attributed particularly to the Tanjore region (fig. 23)[22] of the Coromandel coast (fig. 6)[23].

Mural paintings provide an indication of the patterns in vogue in the range of kalamkari textiles[24] (figs. 7-9, 23, 24). When the European East India Companies[25] began their operations on the coast they found a flourishing trade with Indonesia in existence—spices such as mace, nutmegs and cloves being bought in exchange for south Coromandel textiles. Europeans referred to the textiles used in this trade as *sarassa*, and described them as being flowered[26]. French embassies sent to the court of King Narai of Siam in the years 1685 and 1687 recorded the copious use of painted cloths as canopies, drapery and floor spreads apart from usage in clothing[27]. Mural paintings of the Tangbi monastic library built in Burma in 1704

[22] *J.J. Brennig, op.cit., pp. 22, 23.*

[23] *The fabrics of Tanjore were particularly popular in the Sunda Islands. The Danes, with their establishment at Tranquebar, were well situated to benefit from this trade. See J. Macau,* **l'Inde Danoise**, *Institut d'histoire de Pays d'Outre Mer, Université de Provence, Etudes et Documents, No. 3, pp. 57, 58.*

[24] *The richest repositories are the mural paintings of Veerabadraswamy Temple, Lepakshi,* **circa** *1538. These have been very well reproduced in the publication, Lepakshi, Andhra Pradesh Lalit Akademi, Hyderabad, 1969. Other murals which may be mentioned are those of the Varadaraja Perumal Temple, Kanchipuram, Nayak period, White Vinayaka Temple, Tiruvalanjoli (the murals have been white washed but photographic reproductions are available at the Archaeological Survey of India, Temple Survey Project, Madras); Venugopala Parthasarthy Perumal Temple, Chengam, close of 16th century; Tirolokiar Nadaswamy Temple, Tiruparutikunram, Chingleput district; Thenupuriswara Temple, Pattiswaram,* **circa** *1620; Thiagarajaswamy Temple, Thiruvarur,* **circa** *17th century.*

[25] *The English East India Company had been founded in 1600 A.D., the Dutch* **Vereenigde Oost Indische Compagnie** *(V.O.C.) in 1602, the Danish East Asiatic Company in 1616, the French Compagnie des Indes Orientales in 1664.*

[26] *There is a certain element of contradiction in contemporary records. While company factors would complain of strong local market preferences, there appears to have been an underlying homogeneity as well. Linschoten (A.C. Burnell, ed.,* **The Voyage of John Huyghen van Linschoten to the East Indies**, *Vol. I, London, 1885, p. 91 and n.5) refers to a female garment worn in South India called* **sarasso** *derived from the vernacular term,* **sarassa**, *meaning superior. T. Raychoudhuri (***Jan Company in the Coromandel**, *The Hague, 1962, p. 222) refers to the term* **tapi** *which he explains as being a general name for coloured piece-goods used as skirts (obviously sarongs), both by men and women in many parts of South-East Asia.* **Tapi sarassa** *or* **sarassa malaya** *referred to such fabrics patterned with birds and foliage. Baker (op.cit., p. 25n) refers to* **toorya** *as a painted fabric like* **sarassa**, *but of a very coarse, unstarched variety. Savary des Bruslons (Posthumous work of Jacques Savary des Bruslons, continued by Philemon-Louis Savary, new edition,* **Dictonnaire Universel de Commerce**, *Vol. III, Copenhagen, 1761, p. 505) refers to* **lampasses**, *a painted cloth of the Coromandel which was popular in Asia, more particularly in the Philippines. It would appear that while the dimensions of the piece-goods may have varied, and while there may have been regional preferences, the total outlay in design could be associated with domestic predilections. South Indian mural pai. tings bear out the statement of T. Raychoudhuri above. There appears to have been little differentiation in patterning of painted wear between the two sexes.*

[27] *For a description of these cloths see* **Bibliothèque Nationale**, *Nouvelles Acquisitions, 9380 (265); 7485 (170-174).*

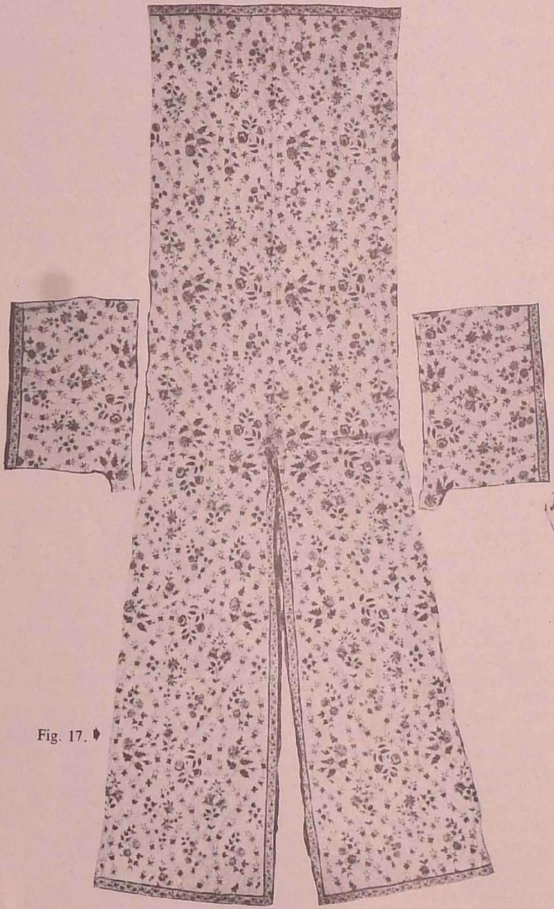
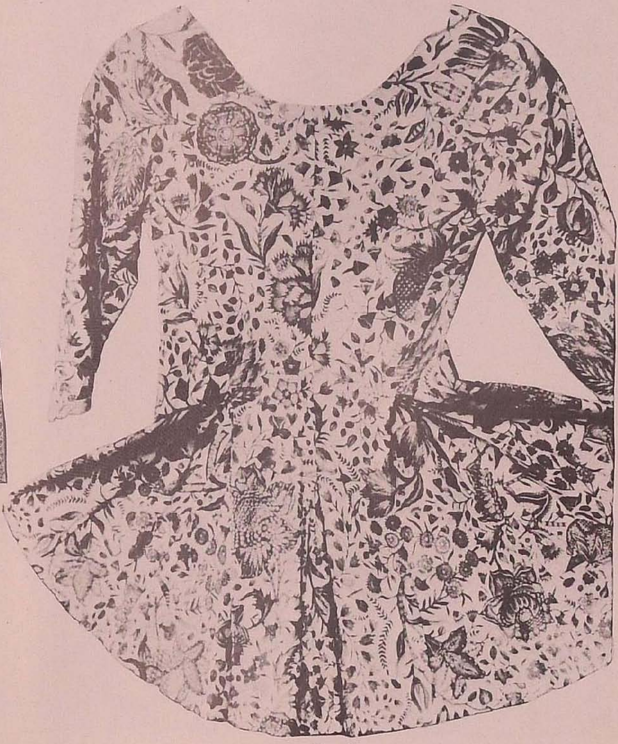


Fig. 17. ➧



▲ Fig. 18.

Fig. 17. This piece had been cut out for being stitched into a Japanese Kimono, but remained unfinished. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Courtesy, Mrs. L. Veldman-Planten.

Fig. 18. *Circa* eighteenth century. Courtesy, Fries Museum, Leeuwarden, Holland.

Fig. 19.

Fig. 21.

Fig. 20.

Fig. 22.

Fig. 19. *Kalpavriksha.* Sanchi Stupa, first century B.C. Courtesy, Archaeological Survey of India, New Delhi.

Fig. 20. Courtesy, Rijksmuseum, Amsterdam.

Fig. 21. Courtesy, Fries Museum, Leeuwarden, Holland.

Fig. 22. Chintz, designed for petticoat. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.

show garments which bear a marked affinity to designs in South Indian murals. If these paintings are taken as samples of Burmese taste then there would be little difference between these export items and domestic ware[28]. Some kalamkari found its way to Japan but because of the ban on the entry of foreign goods in force between 1640 and 1840 A.D. there was no open display of these items. Indian fabrics would be used as underclothes, as lining for the *obi* (sash), or utilised in small pieces in Japanese tea ceremony[29]. There was also the *guingam marchay*, in which the checked pattern was painted, not woven (fig. 28). These were much brighter in colour than the woven variety. The best quality were made in Pulicat, Madras, and San Thomé. The largest consumption was in the Moluccas and Sunda Islands, but quantities were also exported to the Persian Gulf, the Red Sea, the Maldives, Malacca and the surrounding territories[30].

When the European East India Companies entered the field they were interested in the purchase of kalamkari only because of the part these played in the spice trade. During the course of the seventeenth century, and reaching its high watermark in the first half of the eighteenth century, a change occurred. There was a transformation in European culinary tastes. This was marked by a decreasing reliance on salted meat as an item of diet during the winter months. There was a resultant fall in the demand for spices which had earlier been utilised to render salted meat palatable by masking its unsavoury smell. The decline in demand for spices during the seventeenth century was accompanied by an increase in the demand for Indian textiles for which a growing domestic market in Europe began to develop.

Unlike the Asian market for which extant samples are rare, there is much material available on the kinds of kalamkari for which there was European demand[31]. The initial demand was for drapery—bedspreads called *palangposh* with matching

[28] *Artibus Asiae, Vol. XL, 1, 1978, J.T. Bailey, "Some Burmese paintings of the seventeenth century and later", figure 6. In this context the permeation of Indian culture into South-East Asia in earlier times may have prepared the ground for the diffusion of taste in textiles also.*

[29] *Information courtesy: Yamanobe Tomoyuki. According to the same author (see Japan Quarterly, 1966, "Dyeing through the ages", p. 208), the Portuguese introduced sarassa to Japan.*

[30] *Legoux de Flaix, op.cit., II, pp. 130-132. Once again a link with the domestic ware can be established. South Indian mural paintings not only show floral designs but also striped and checked ones. The English term gingham denoting checked materials has been derived from this earlier prototype.*

[31] *There are major museum holdings and private collections in England, France, Holland and Portugal. In India, the Calico Museum, Ahmedabad, needs to be mentioned. There are a few late examples of kalamkari at the Salar Jang Museum, Hyderabad, and the Government Museum and National Art Gallery, Madras.*

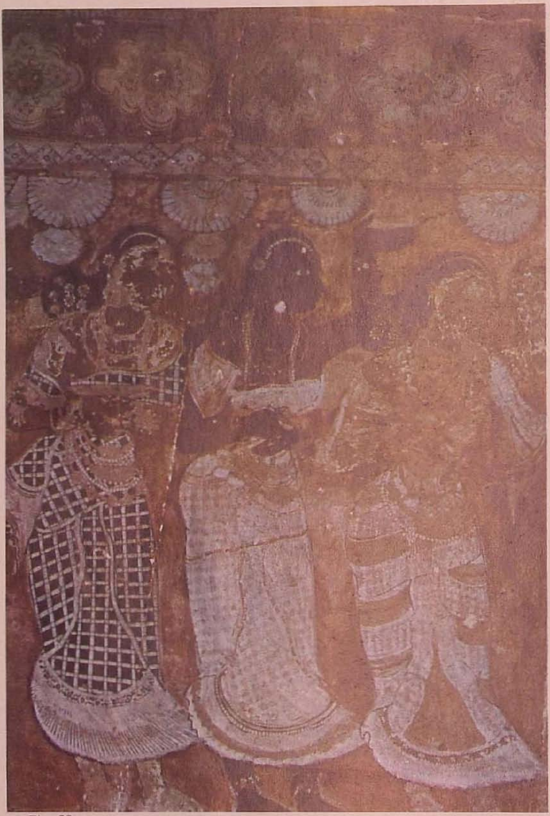


Fig. 23.

Fig. 24.

Fig. 25.

Fig. 23. Tenupuriswara Shiva Temple, Pattiswaram. The temple itself belongs to the Chola period but fresco paintings, which show contemporary fabrics, may be dated *circa* 1620 A.D.

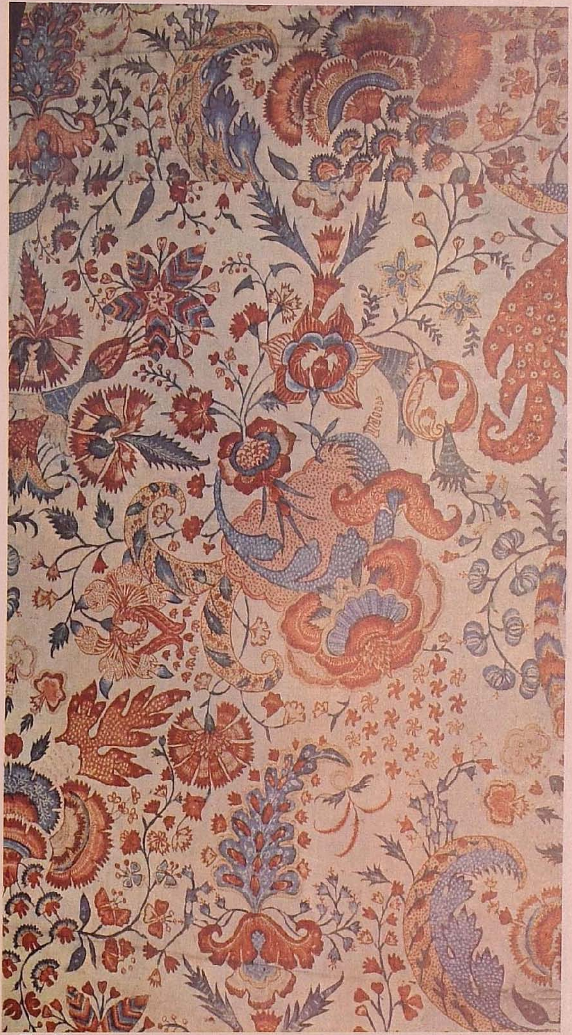
Fig. 24. Ceiling design, White Vinayaka Temple, Tiruvalanjoli. Nayak period. Much of the mural paintings in this temple have been white washed. This is one of the few painted areas which remain unobscured.

Fig. 25. *Circa* eighteenth century. Border design. Courtesy, Mrs. L. Veldman-Planten, Private Collection, Menkamaborg, Holland.

Fig. 26. *Circa* eighteenth century. Courtesy, Victoria and Albert Museum, London. Note the finely veined patterning.

Fig. 27. Ashburnham Hangings, *circa* seventeenth century. Courtesy, Victoria and Albert Museum, London. This piece clearly shows the influence of English crewel embroidery.

Fig. 28. Mural painting, Veerabhadraswamy Temple, Lepakshi, sixteenth century. Courtesy. Archaeological Survey of India. The floral pattern to the left may perhaps be identified as *sarassa* while the checked pattern to the right may be placed in the *guingam marchay* category.

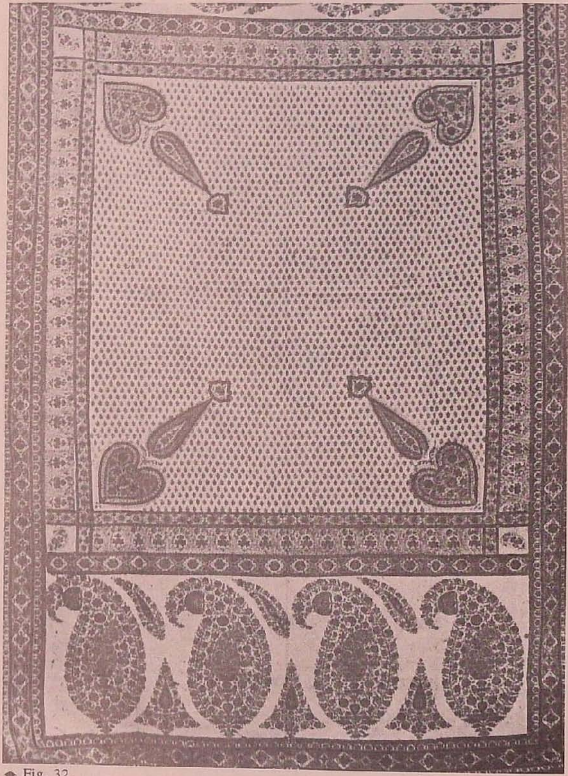


▲ Fig. 26.

▲ Fig. 27.

▼ Fig. 28.

▲ Fig. 29. ▼ Fig. 30. ▲ Fig. 31.



▲ Fig. 32.

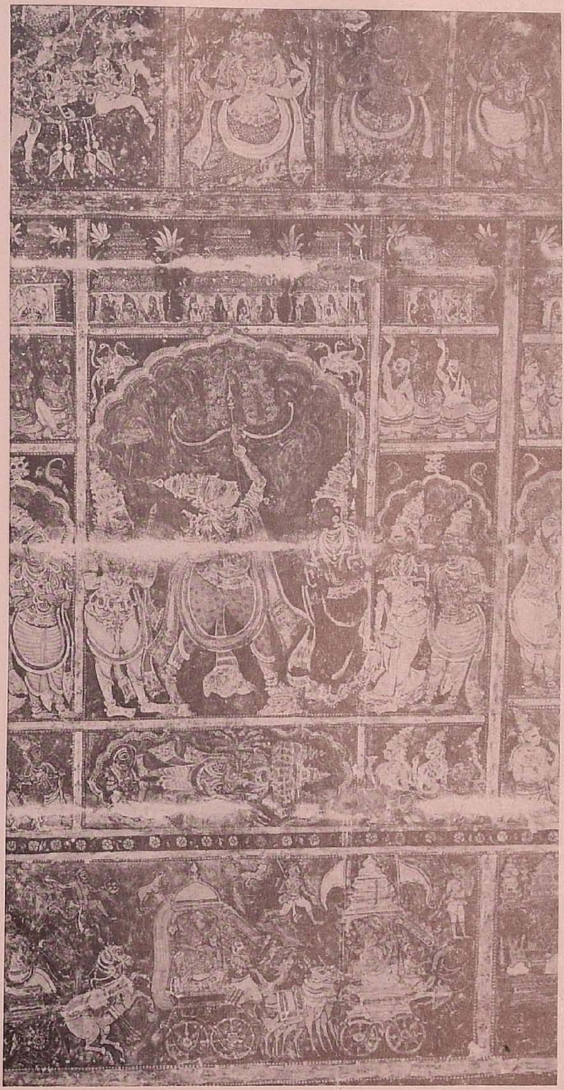
Figs. 29, 32. *Khadife.* The white background denoted usage by females, while red denoted that by males.

Fig. 30. Prayer mats, Akhawan Chitsaz Private Collection, Isfahan. Courtesy, Akhawan Chitsaz.

Fig. 31. *Circa* late nineteenth century. Hanging. Courtesy, State Archaeological Museum, Hyderabad. Partly painted and partly printed.

Fig. 33. Mural painting, fifteenth century. Virupaksha Temple, Hampi. Courtesy, Archaeological Survey of India.

Fig. 33. ▶



canopies. The background was usually white. The patterning could either be an all over floral design (figs. 10-12, 25-27, 34) or a variation of the tree of life (figs. 13-16). The tree of life reached Europe in a circuitous manner. The Chinese contour (fig. 38), transformed by Iranian imagery (fig. 36), was transferred to Europe whence it was brought to the South Indian coast. The Indian inspiration for the *kalpavriksha*, desire fulfilling tree (fig. 19), was very different from the European model. There was also considerable demand for handkerchiefs[32] and table linen but extant samples are difficult to trace.

The usual practice for placing orders from the home country was the despatch of master copies or samplers to agents in India. Minor changes would be indicated in subsequent correspondence. These could include changes in colour scheme or preferences for one kind of filling motif rather than another. Palangposhes were ordered in different sizes. The artisan tried to make a faithful copy of the original, but coming from an alien cultural background some distortion was inevitable (fig. 35). It was when the sampler could not be expanded sufficiently to cover the entire area desired that the artisan could give some play to his imagination and introduce an indigenous touch (figs. 37, 39). It was in this way that elements introduced from sources such as English crewel embroidery were transformed into flowered chintz design[33]

[32] *The demand for calico handkerchiefs was linked to the increasing habit of taking snuff by both sexes in Europe. The white linen and lace handkerchiefs were too delicate and tended to show up the stains. Most varieties of handkerchiefs imported from the south coast were dyed. The French term for kalamkari handkerchiefs was* **mouchoirs à vignettes**. *After 1790, copies began to be made in Europe. In 1790, Daniel and Melchoir Esslinger produced printed Turkey red handkerchiefs in Zurich. In 1810, Turkey red handkerchiefs patterned through the discharge process called* **Merinos** *were made by Daniel Koechlin at Mulhouse. The English developed the* **bandana** *(from* **bandhani** *tie and dye) using a combination of resist and discharge. The bandana was very popular among African slaves on the American plantations. After 1880, there was a decline in snuff taking and earlier monochrome hues reappeared. See M. Braun Ronsdorf,* **The History of the Handkerchief**, *England, 1967, pp. 29, 30; Blancard,* **op.cit.**, *pp. 236-238;* **Ciba Review**, *89, M. Braun Ronsdorf, "The history of the modern handkerchiefs in antiquity", see* **ibid.**, *M. Braun Ronsdorf, "The sudarium and orarium of the Romans", pp. 3198-3200. Although there is a reference to the rumal being used in India for wiping the brow (Legoux de Flaix,* **op.cit.**, *II, p. 76), by and large it was used as material for covering small objects at times of travel. Ceremonial gifts and votive offerings would also be covered with rumals.*

[33] *For the full range of inputs which contributed to the evolution of what could be loosely called* **chintz design** *see* **De Vrige Fries**, *part 43, 1957, A.M. Lubberhuizen van Gelder, "Voorindische sits in de Klederdracht", p. 125; J. Irwin, P.R. Schwartz,* **Studies in Indo-European Textile History**, *Ahmedabad, 1966, pp. 51-56;* **Homage to Kalamkari**, *K. Brett, "Some important Indian chintzes in the Royal Ontario Museum, Toronto", pp. 87-94;* **Journal of the Indian Textile History**, *III, 1957, K.B. Brett, "The flowering tree in Indian chintz design", pp. 45-47;* **ibid.**, *IV, 1959, J. Irwin, "Indian textile trade in the seventeenth century–foreign influences", pp. 57-64;* **ibid.**, *V, 1960, K.B. Brett, "The Japanese style in Indian chintz design", pp. 42-50.*

◆ Fig. 34.

30

Fig. 34 is of special interest. The motif in the outer border was executed exclusively for the Dutch company. There is also a strong Chinese impress on the design outlay.

Fig. 35. *Circa* eighteenth century. Courtesy, Victoria and Albert Museum, London. Since the flower vase is alien to Indian traditions of floral decoration, the distortion perceptible in the form of the vase is understandable.

Fig. 36. Embossed book cover depicting tree of life. Iran, sixteenth century. Courtesy, Museum of Islamic Art, Istanbul.

Fig. 37. Eighteenth century. Courtesy, Victoria and Albert Museum, London.

Fig. 38. Ch'ing, eighteenth century. Courtesy, Topkapi Palace Museum, Istanbul.

Fig. 39. Detail of fig. 14. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.

Fig. 40. Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.

Fig. 41. Insignia, Veldman-Planten Private Collection, Menkamaborg, Holland. Courtesy, Mrs. L. Veldman-Planten.

Fig. 35.

Fig. 37.

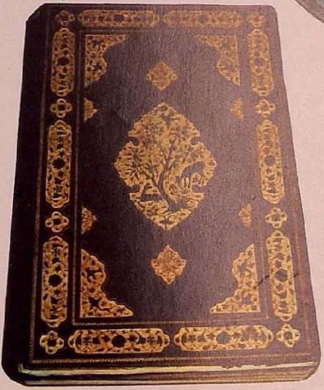
Fig. 39.

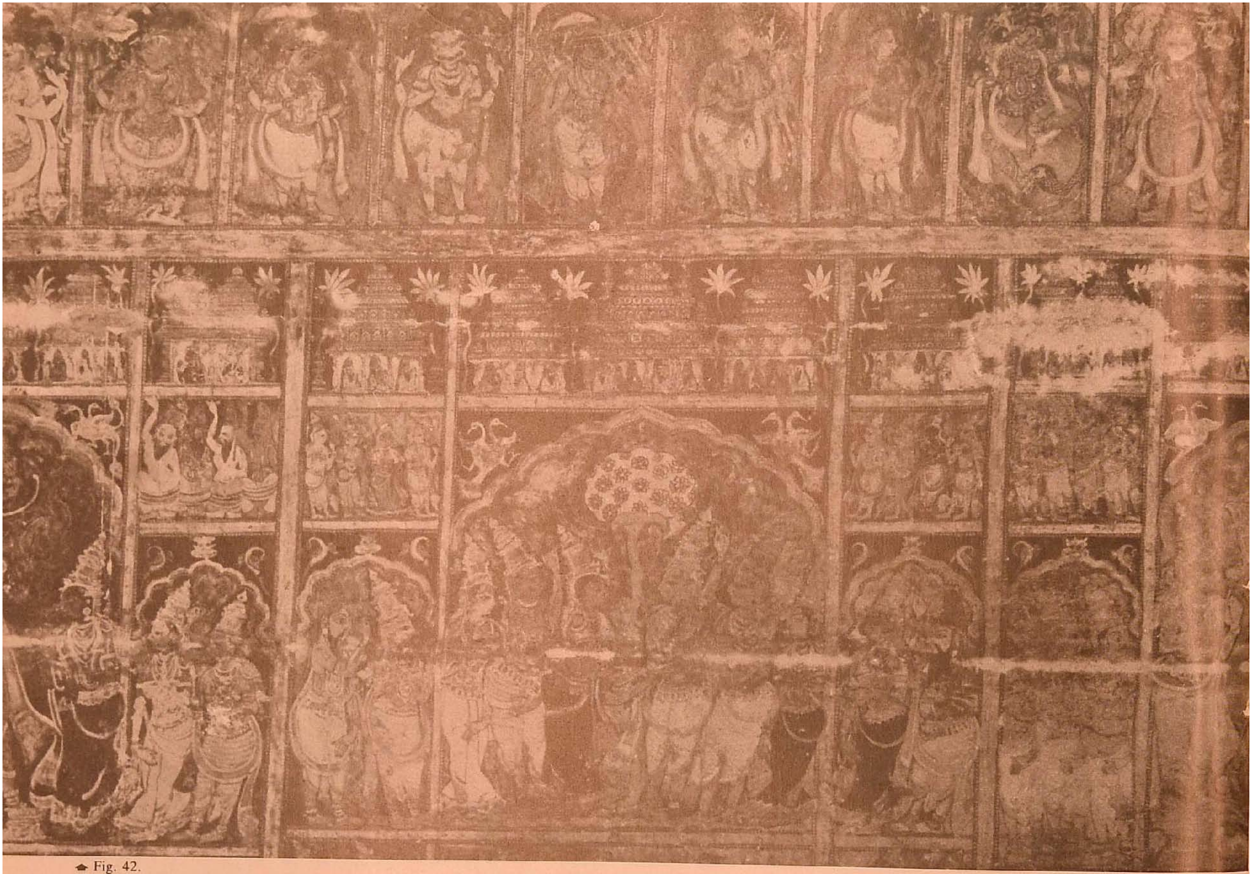
Fig. 41.

Fig. 40.

Fig. 38.

Fig. 36.





▲ Fig. 42.

Fig. 42. Mural painting, fifteenth century. Virupaksha Temple, Hampi. Courtesy, Archaeological Survey of India.

Fig. 43. Hanging executed at Pulicat. Courtesy, Calico Museum, Ahmedabad.

Fig. 44. Detail of fig. 43. Courtesy, Calico Museum, Ahmedabad.

Fig. 45. This is a long narrow strip with repeats of the same motif. Courtesy, Musée des Arts Decoratifs, Paris.

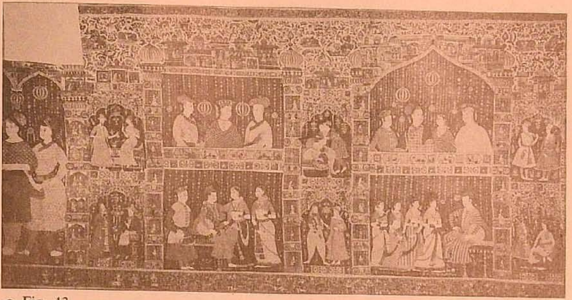


Fig. 43.

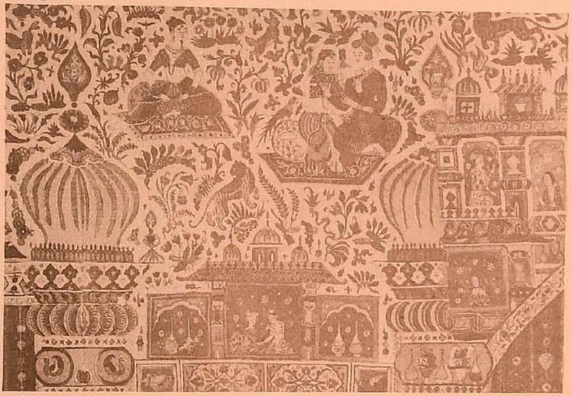


Fig. 44. Fig. 45.

Whereas articles vended in the Asian carrying trade could be linked with domestic ware, European requirements added a new dimension to the existing storehouse of design.

Apart from the tree of life and all over floral and vegetal designs, special items were made with specific crests for courtly families (fig. 41). There were also orders for quilts, when the quilting pattern would form part of the design component (figs. 20, 21, 40).

Although kalamkari lacked the opulence of silk, velvet and brocade, the highly glazed surface[34] and vivid colours were found to constitute pleasing variants in costume material. During the seventeenth century, soap had come into increasing usage and cottons were much easier to launder than silk[35]. Japanese style kimonos (fig. 17) and smoking jackets (fig. 46)[36] were popular among men. For women, kalamkari was used as dress material and also specially designed for petticoats (figs. 22, 47). Smaller patterns were commandeered for children's garments and bonnets (figs. 48, 50, 53). Whereas in England and France the fashion started with the privileged members and then seeped down to the bourgeoisie, in Holland kalamkari became an integral part of Dutch peasant costume particularly in the rural clusters dispersed around the Zuyder Zee[37]. During the eighteenth century, periods of mourning began to be rigorously observed particularly in Holland. The range of colours in kalamkari offered the decorous married woman an opportunity to display the different stages of mourning by sporting the appropriate tone as the dominant colour in the kalamkari of her choice. Red and white were bridal colours (fig. 51)[38]. There were also the printed items which were further embellished by the superimposition of outlining or filling in with gold and silver leaf (*khari*). These were called *chites matabis*[39] and were in great demand for ball dresses (fig. 52). In England it was the usual practice to have all accessories fashioned from Indian fabrics if kalamkari was the chosen medium. Delicate Flemish lace was reserved for

*[34] The finish included a highly starched surface which was rubbed with a shell (shankh) resulting in an attractive lustrous gloss. See **Journal Oeconomique**, September, 1956, p. 74; Hadaway, op.cit., p. 7.*

*[35] See **Ciba Review**, 56, G. Schaefer, "Historical facts concerning the production and use of soap", pp. 2014-2019; ibid., G. Schaefer, "Some old fashioned ways of cleaning textiles", pp. 2034-2037.*

*[36] **Voedingsnieuws**, No. 63, N.V. Nutricia, Zoetmeer, winter, 1970, "**Indo-Europese Textiel**," p. 1027.*

*[37] **De Vrije Fries**, part 43, 1957, A.M. Lubberhuzen van Gelder, pp. 121, 127, 128.*

[38] Information courtesy M. Le Fèbre, Curator, Hidde Nijland Stichtung, Hindeloopen, Netherlands.

[39] Legoux de Flaix, op.cit., II, pp. 91-93, 277.

◆ Fig. 46.

◆ Fig. 47.

◆ Fig. 48.

Fig. 49. ◆

◆ Fig. 50.

Fig. 46. Smoking jacket. Courtesy, Hidde Nijland Stichtung, Museum of Hindeloopen, Holland. So popular did this informal attire become that its usage in public gatherings came to be proscribed in Holland during the eighteenth century.

Fig. 47. Chintz, designed for petticoat. Courtesy, Victoria and Albert Museum, London.

Fig. 51.

Fig. 53.

Fig. 52.

Fig. 54.

Fig. 55.

Fig. 56.

Fig. 48. Children's garment. Courtesy, Hidde Nijland Stichtung, Museum of Hindeloopen, Holland.

Fig. 49. Courtesy, Gallery of English Costume, Manchester.

Fig. 50. Children's garment. Courtesy, Mrs. L. Veldman-Planten, Menkamaborg, Holland.

Fig. 51. Courtesy, Hidde Nijland Stichtung, Museum of Hindeloopen, Holland. The seated lady is in bridal wear, while the standing figure is in mourning, but not in fullest intensity. The shades for mourning range from deep indigo through mauve to lighter hues.

Fig. 52. Courtesy, Musée des Arts Decoratifs, Paris.

Fig. 53. Costume accessories in chintz, *circa* eighteenth century. Courtesy, Hidde Nijland Stichtung, Hindeloopen, Holland.

Fig. 54. Detachable sleeve for child. Courtesy, Textile Museum, Enschede, Holland.

Fig. 55. *Patka, circa* seventeenth/eighteenth century. Courtesy, Victoria and Albert Museum, London.

Fig. 56. Detail from sleeve of a *kurta*. Courtesy, Victoria and Albert Museum, London.

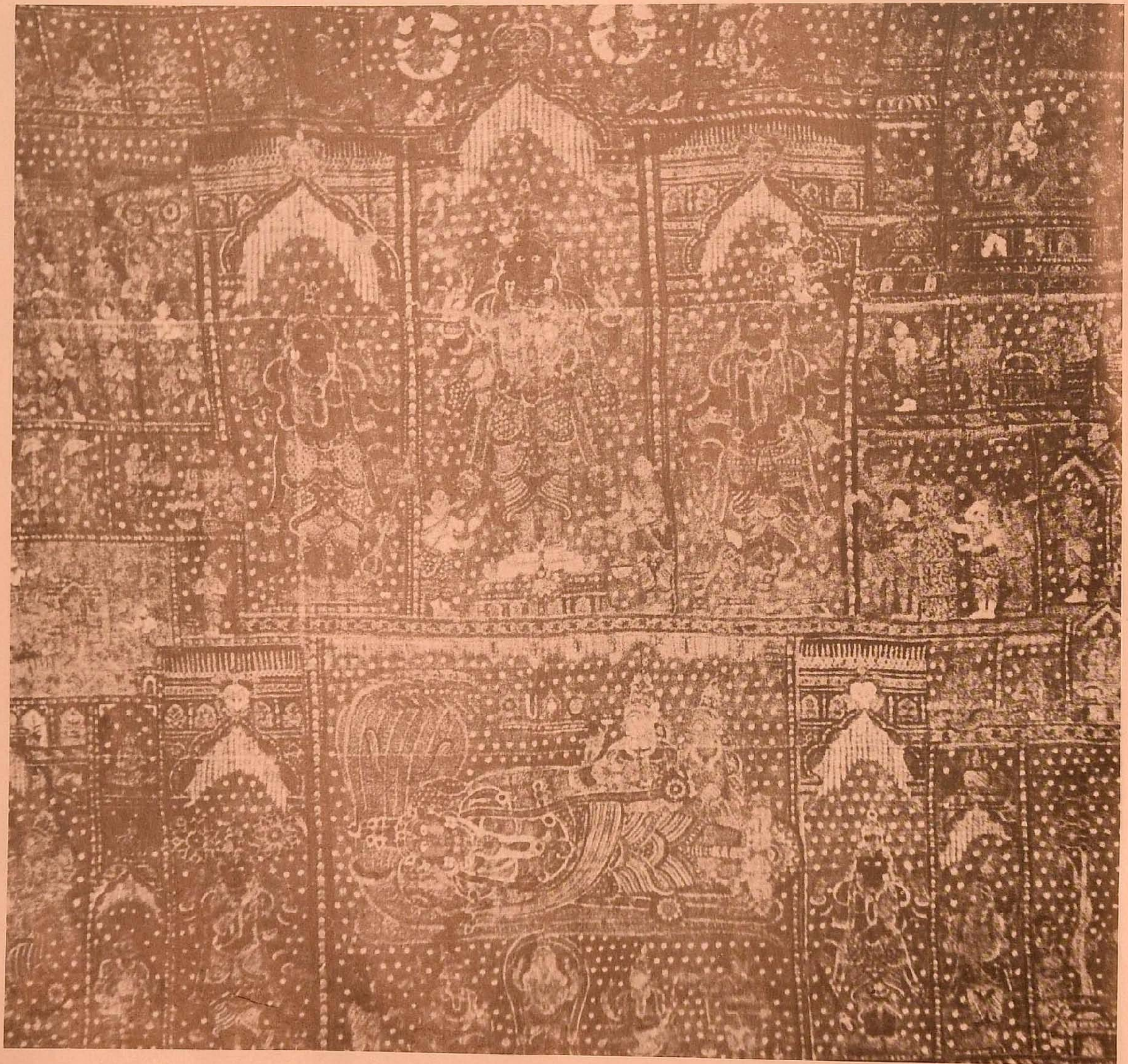


Fig. 58.

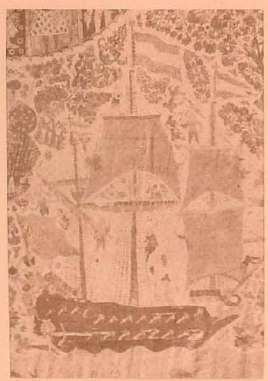


Fig. 60.

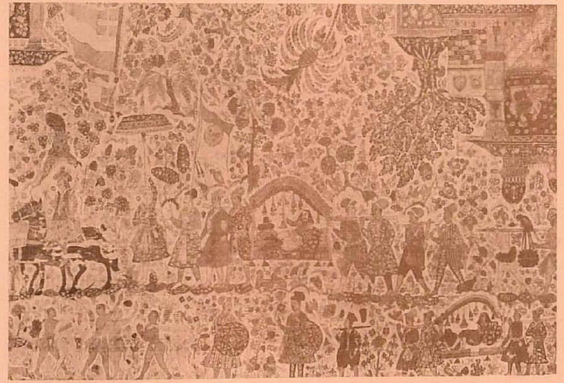


Fig. 59.

Fig 57. Hanging, *circa* seventeenth century, probably Pulicat region. Courtesy, Trustees of Prince of Wales Museum, Bombay.

Figs. 58-60, 66, 72. Courtesy, Musée des Arts Decoratifs, Paris. Fig. 59 is a detail of fig. 60 depicting scenes of Dutch life in the East.

Fig. 57.

silken ware. Its place was taken by muslin if the costume material was of Indian origin. At times kalamkari would be combined with Bengal silk (fig. 49). Apart from dresses, skirts and jackets (fig. 18) being fashioned from kalamkari, further variation was introduced in Holland by the practice of detachable sleeves which could be sewn on as desired (figs. 53, 54).

Apart from the European market, kalamkari was also made to suit Islamic customers at home and abroad. Persianised Mughal influence exerted a strong pull in the range of *jama* (long shirt) and patka (waist band) material (figs. 55, 56). The design executed as *parde* (hangings) and *jah-i-namaz* (prayer mats) were very different from the tree of life executed for the European market. The dominant motifs were the *mihrab* outline and cypress tree motif. It was usual to have some inscriptional device worked into the format of the prayer mat (figs. 30, 61-63). It was common to find animal motifs particularly in *suzni* (quilts) and parde (figs. 64, 65)[40]. The earlier symbolic meanings associated in Sufism with various animal and floral forms in Iran[41] must have been lost on the Indian artisan who introduced motifs such as the peacock and the parrot purely for their pictorial qualities. Whereas in Gujarat there was no basic departure between domestic kalamkari and that manufactured for Islamic customers[42], on the southern coasts the situation was different. A conscious adjustment had to be made in the same way as in serving European demand.

The Industrial Revolution brought about large changes. European markets were lost to Indian kalamkari. A vigorous tradition of batik had developed in Indonesia during the nineteenth century and Indonesian batiks had replaced Indian ware on the West African market[43]. The link with the Persian market alone appears to have continued, and after the mid-decades of the nineteenth century, kalamkari in Masulipatam appears to have been geared exclusively to the needs of the Iranian customer. By this time earlier traditions had snapped and there was growing usage of the block (figs. 31, 65). A curious situation now arose. Blocks began to be duplicated in Iran and identical motifs could be executed. Some of the

[40] *Although illustrations for prayer mats and hangings have been drawn from Iran, identical blocks exist in Masulipatam and craftsmen belonging to the latter region claim to have exported these items to Iran in the past.*

[41] *See Journal of the Royal Asiatic Society, 2, 1978, S. Cammann, "The interplay of art, literature and religion in Safavid symbolism", pp. 128-130.*

[42] *See forthcoming issue of Journal of the Indian Society of Oriental Art, Lotika Varadarajan, article cited.*

[43] *Ruth Nielsen, **The History and Development of Wax-printed Textiles intended for West Africa and Zaire**, unpublished Ph.D. dissertation available at Tropical Museum, Amsterdam, p. 29; W.T. Kroese, **The Origin of the Wax Block Prints on the Coast of West Africa**, Hengelo, 1976, pp. 9-11, 39-41.*

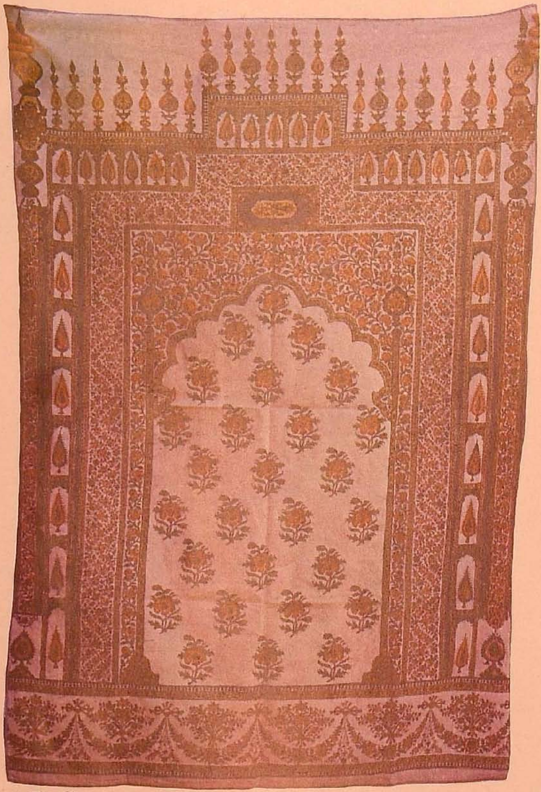


Fig. 61.

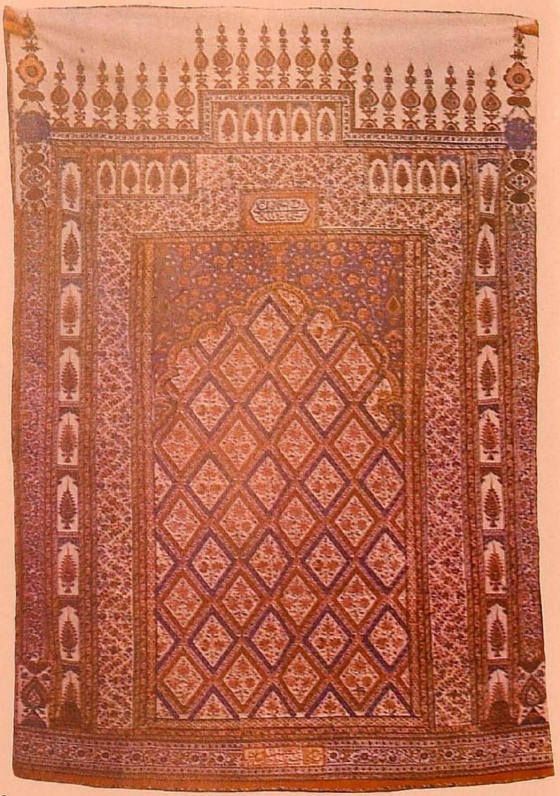
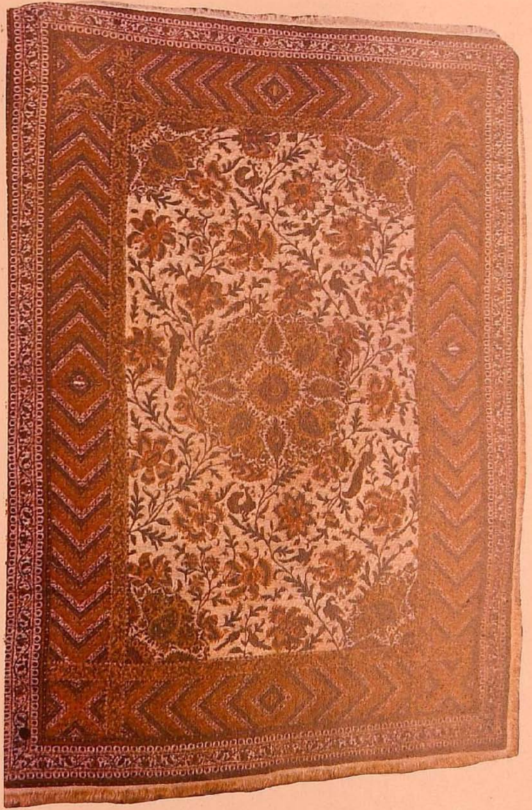


Fig. 62.

Fig. 63.



▲ Fig. 64.

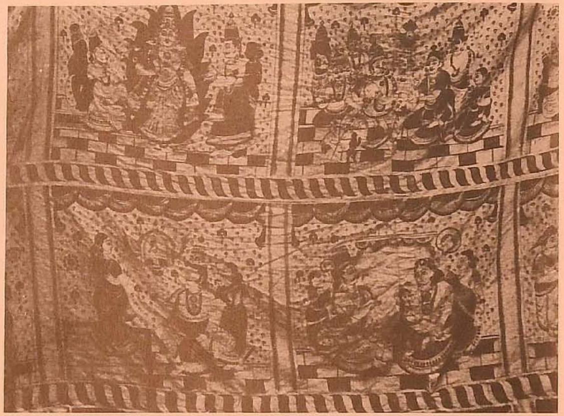
Fig. 61-63. Prayer mats, Akhawan Chitsaz Private Collection, Isfahan. Courtesy, Akhawan Chitsaz.

Fig. 64. *Suzni.* Unlike the suzni or quilt in India, the suzni in Iran does not appear to have been necessarily padded as is illustrated by this sample.
Akhawan Chitsaz Private Collection, Isfahan. Courtesy, Akhawan Chitsaz.

Fig. 65. *Parde* or curtain. Akhawan Chitsaz Private Collection, Isfahan. Courtesy, Akhawan Chitsaz.

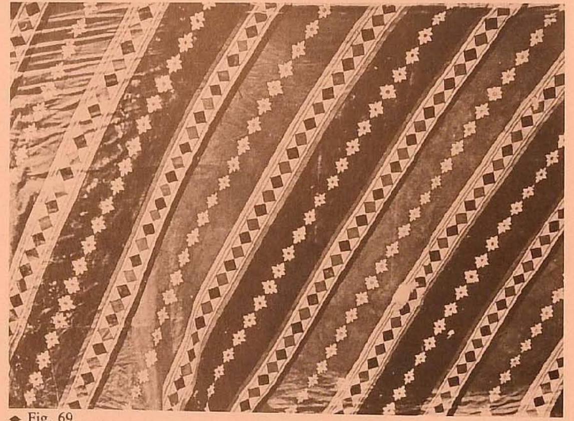
▲ Fig. 65.

▲ Fig. 66.



▲ Fig. 68.

▲ Fig. 67.



▲ Fig. 69.

Fig. 66. An example of French taste in *chinoiserie* executed in South India. Eighteenth century. Courtesy, Musée des Arts Decoratifs, Paris.

Fig. 67. *Circa* seventeenth century. Krishna Riboud Private Collection, Paris. Courtesy, Madame Krishna Riboud. Unlike the piece at the Prince of Wales Museum, Bombay (fig. 57), the background colour in this sample is white.

Fig. 68. Canopy, locally referred to as *mankari* or *melkutti,* detail. Courtesy, Sri Kashinatha Matha, Tirupanandal, Tamil Nadu.

Fig. 69. Sample from Sri Mahalingaswamy Temple, Thiruvidaimarudur, Tamil Nadu. The finely glazed surface is reminiscent of the seventeenth century chintz ware.

motifs used in Iranian parde, prayer mats and *khadife* (towels taken to the *hamam*), in the collection of Akhawan Chitsaz, Isfahan, are to be found at Masulipatam also (cf. figs. 29, 32, 62, 65 with 85, 146, 147)[44].

We now come to the last category of historic kalamkari; figurative kalamkari which represented perhaps the most exacting examples of the dyers' art. The Vijayanagar period is associated with a great efflorescence of Telugu culture. Several works were translated from Sanskrit into Telugu in the fourteenth and fifteenth centuries[45]. Puranic stories provided the inspiration for mural paintings executed in a running series on temple walls. The compartmentalisation of space in evidence in the paintings at the Virupaksha Temple at Hampi (figs. 33, 42), provided an easy prototype for the insertion of narrative panels of explanatory text in later wall paintings (fig. 70). In earlier panels the text was inscribed in Telugu even in Tamil speaking regions.

This tradition was repeated in the medium of kalamkari[46]. The Europeans had figurative wall hangings executed, and although thematically these were quite different from those produced for temples, the basic homogeneity in art tradition was very apparent (compare figs. 43, 44, with 57, 71). The Indian artisan had difficulty in reproducing life-like images of Europeans. The only exception appears to be a very fine, fragment made for the French East India Company and currently housed at the Musée des Arts Decoratifs, Paris (fig. 45)[47]. By and large, there appears to have been a curious blend of Indo-Persian influence in figurative wall hangings executed at the instance of the European East India Companies (figs. 58-60, 72). When the French East India Company ordered a hanging with a Chinese theme, the result was even more extraordinary (fig. 66). Figure 73 taken from a hanging executed for Persianised taste makes a pleasing contrast by the fineness of its execution and its thematic harmony. Figure 75 shows a hanging made for the Armenian Church in Madras. Only two examples can be cited of wall hangings of this period of a specifically Hindu genre; a very fine piece in the private collection of Madame Krishna Riboud, Paris, and a large wall hanging on display at the Prince of Wales Museum, Bombay (figs. 57, 67). The two most flourishing centres for these large wall hangings were Pulicat, near Madras, and Palakollu in the Masulipatam area. Although the activity appears to have declined at Pulicat in the eighteenth century, figurative kalamkari continued to be made at Palakollu until the opening years of the twentieth century (fig. 74)[48].

LATER DEVELOPMENTS

Kalahasti became an important centre only in the nineteenth century. Specimens executed in Andhra Pradesh late in the nineteenth century and in the early years of the twentieth century may be found at the Salar Jang Museum, and the State Archaeological Museum, Hyderabad. Temple cloths were made at centres such as Salem and Kumbakonam in the early twentieth century, but the lone representative of this tradition is confined today at Sickinaikkenpet. The samples made in the Masulipatam area show that figurative kalamkari was now being drawn freehand, or in combination with block printing as was the practice in Isfahan. The narrative component was very strong in the Kalahasti school but here there was no recourse to the block. Temple cloths executed in the Tanjore region show a pleasing combination of figurative and non-figurative designs (figs. 68, 69, 80). During the later period there also appears to have been a link between the items made in the Tanjore craft region and markets in Sri Lanka such as Jaffna where there was a large Tamil ethnic component in the local population (fig. 78).

Another late manifestation of kalamkari is related to the Tanjore region. The Maratha ruling court at Tanjore was associated with the development of a very beautiful category of kalamkari garment material which came to be called *Karrupur*[49]. The basic material was finely woven cotton with a brocaded motif. These appear to have been woven by Saurashtra weavers patronised by the Tanjore court. The woven brocaded cloth was now further embellished by very fine kalamkari motifs (fig. 77). The workmanship was of such an elevated order that only royalty could afford the high prices. With the decline in the fortunes of the Tanjore royal

[44] *See supra, n. 40. It is against this background that the work of Nellie Sethna may be assessed.*

[45] *R. Nagaswamy, ed., **South Indian Studies**, Madras, 1978, Chitra Viji, "The Bhagavata Purana Paintings at Srirangam", pp. 53, 54.*

[46] *Narrative kalamkari may also have received inspiration from the chitrakatha, a very old tradition in India. See **Kalakshetra**, 1978, V.P. Dwivedi, "The Chitrakatha tradition in Indian art", pp. 17, 19-21.*

[47] *Less successful are the results achieved in the hanging published in **Homage to Kalamkari**, facing p. 79.*

[48] *Refer to **Salar Jang Bi-annual Research Journal**, Vol. III, 1971-72, K.S.R. Murthy, "A brief note on a Palakollu kalamkari textile", pp. 30-37.*

[49] *See Hadaway, op.cit., pp. 9, 10.*

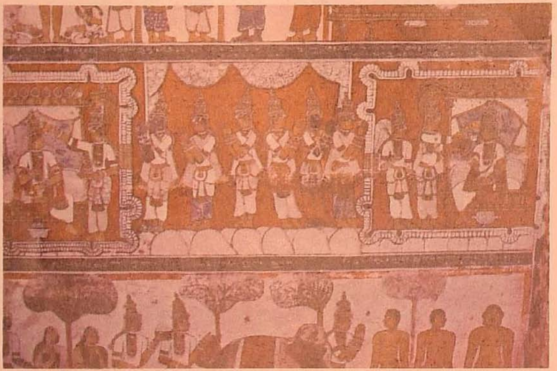


Fig. 70.

Fig. 71.

Fig. 72.

Fig. 73.

Fig. 74.

Fig. 70. Mural paintings, seventeenth century. Tirolokiar Nadaswamy Temple, Tiruparutikunram, Tamil Nadu. Note the explanatory script along the panels. Cf. fig. 155.

Fig. 71. Detail of fig. 57. Courtesy, Trustees of Prince of Wales Museum, Bombay.

Fig. 72. Kalamkari of the Golconda region. Subsequently embroidered in England. *Circa* eighteenth century. Courtesy, Victoria and Albert Museum, London.

Fig. 73. Item executed for Persianised taste. Golconda. Seventeenth/eighteenth centuries. Courtesy, Victoria and Albert Museum, London.

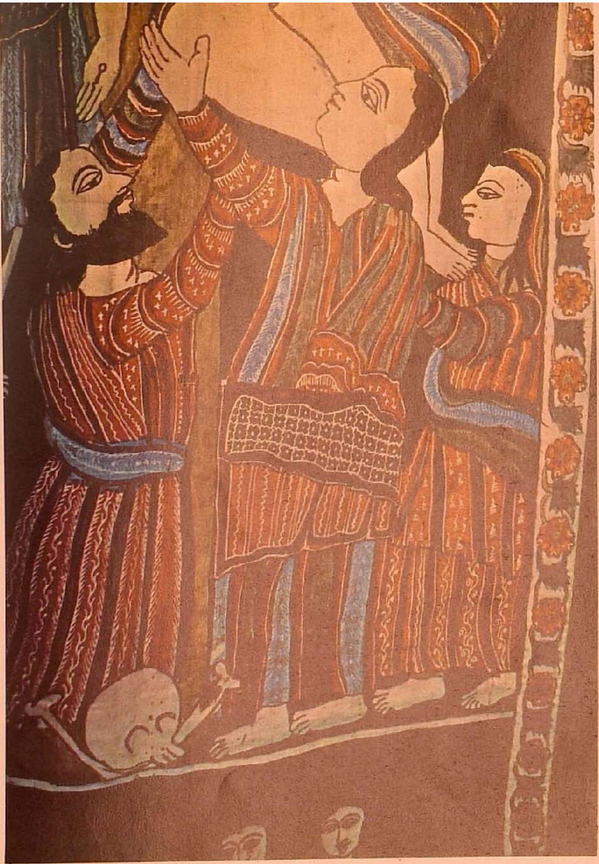


Fig. 75.

Fig. 76.

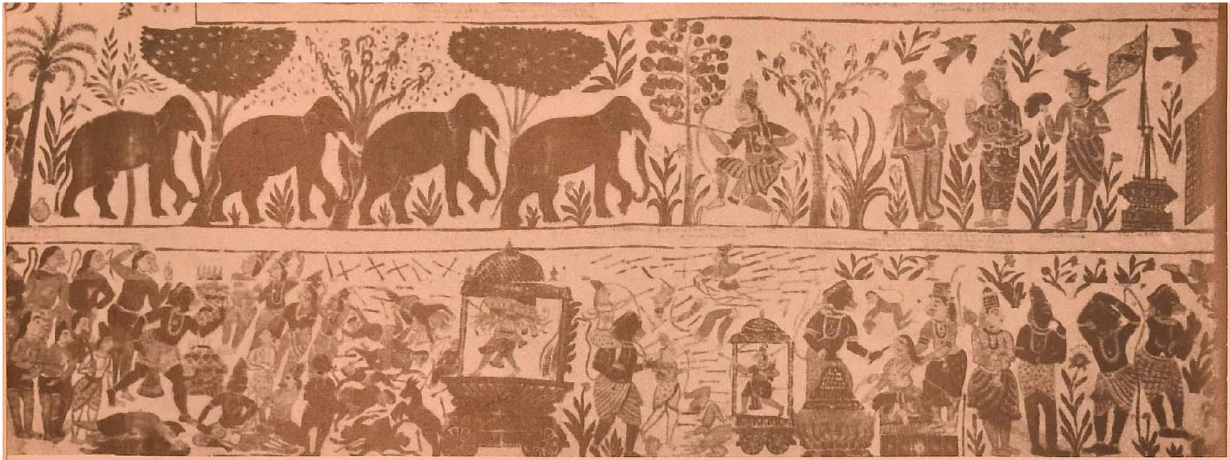
Fig. 77.

Fig. 74. Courtesy, State Archaeological Museum, Hyderabad. The depiction of the tree on the right was closely associated with late Palakollu workmanship.

Fig. 75. Eighteenth century. Painted for the Armenian Church. Courtesy, Victoria and Albert Museum, London.

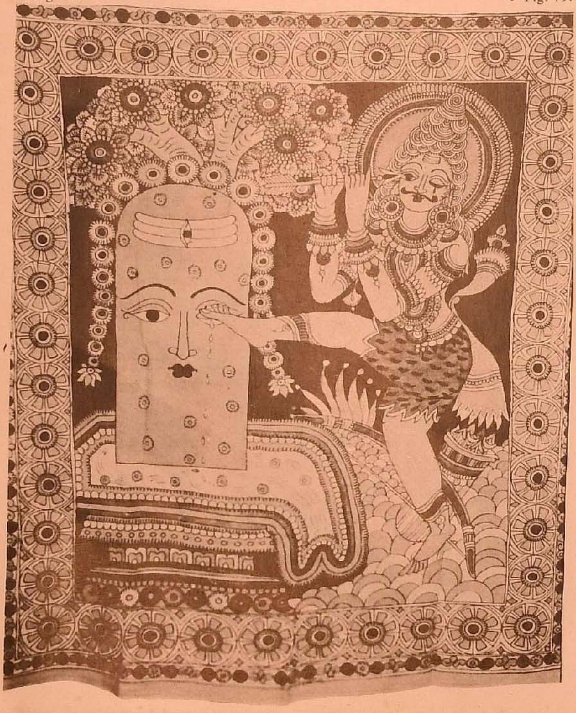
Fig. 76. Courtesy, Kalamkari Training Centre, Panagal, Kalahasti.

Fig. 77. Courtesy, Trustees of Prince of Wales Museum, Bombay. The fine design in kalamkari executed around the *zari* (gold) brocaded motifs are to be noted.



▲ Fig. 78.

▼ Fig. 79.



▲ Fig. 80.

Fig. 78. Courtesy, Calico Museum of Textiles, Ahmedabad.

Figs. 79, 81. Courtesy, Kalamkari Training Centre, Panagal, Kalahasti.

Fig. 80. Temple Hanging. Sri Mahalingaswamy Temple, Thiruvidaimarudur, Tamil Nadu.

◀ Fig. 81.

house, the tradition went into oblivion and not a trace of this activity remains today at Kodali Karrupur.

During the earlier period, kalamkari represented a fine fusion of an extremely complex craft activity and aesthetic content of a high quality. There have been many departures in modern times. Several of the newer entrants into the craft, encouraged by Government schemes, have only gained superficial expertise. Where synthetic colours are in usage, although techniques and motifs may still be traditional, there is a discomforting garishness in final effect (figs. 76, 79, 81). It is very necessary at this point in time to evolve a policy whereby the craft may be encouraged without deterioration of standards or dilution of aesthetic content. These considerations are as important as any socio-economic *desiderata* aimed at improving the position of the artisan and levelling out caste distinction.

CHAPTER THREE

Contemporary Block Printed Kalamkari at Masulipatam

Details of Existing Techniques

Features of Design and Craft Content

Contribution of Nellie Sethna

Block Printed Kalamkari Units in Madras

Fig. 82.

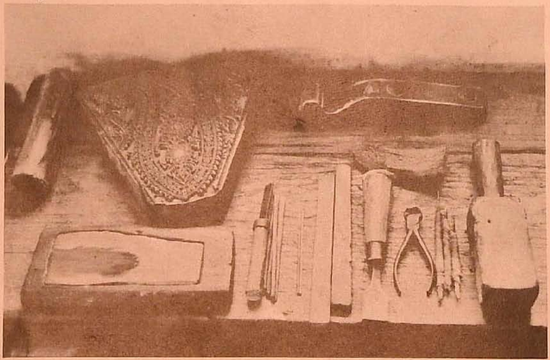


Fig. 83.

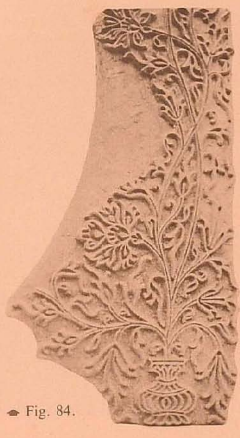


Fig. 84.

Fig. 85

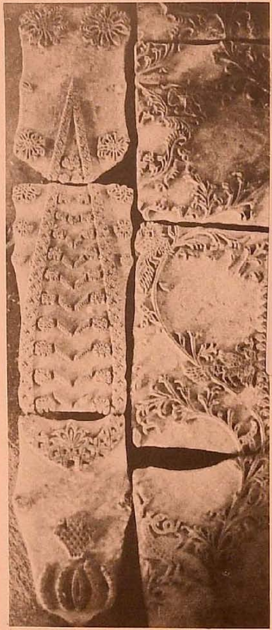


Fig. 82. Tools used in carving of block. On the top right hand corner adjacent to the finished block is the planer. In the forefront on the extreme right is the wooden hammer used for chiselling out large areas which constitute the negative portions of the block. The two objects next to the hammer are two umbrella steel frame tools fashioned for purpose of fine etching. These are followed by plyers, chisel, wooden boards used as hammers when smaller areas need to be chiselled, portions of the steel frame of the umbrella prior to conversion into finished tools, variegated chisels and finally, the stone on which the metal of the umbrella frame is sharpened.

Fig. 83. Wooden printing block. Courtesy, Shri V. Venkataswamy Naidu, Masulipatam, Andhra Pradesh.

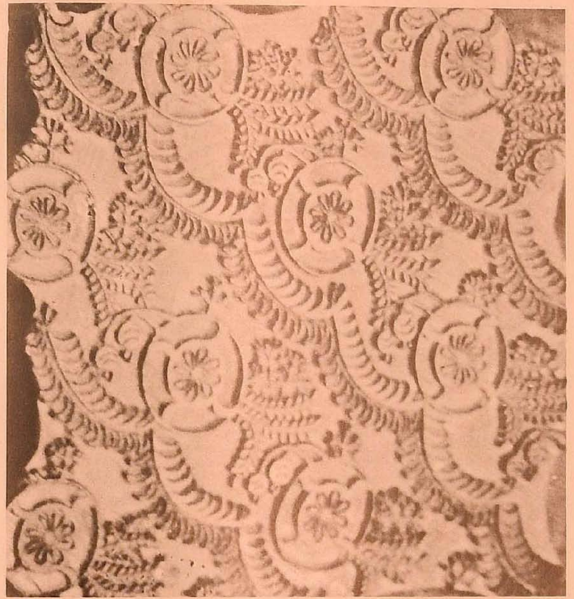


Fig. 86.

Fig. 87.

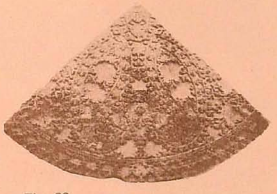


Fig. 88.

Fig. 84. Wooden printing block. Courtesy, Shri Rekhapalli Parthasarthy, Masulipatam, Andhra Pradesh.

Fig. 85. Wooden printing blocks showing cone or cypress tree motif used in prayer mats. Courtesy, Shri V. Venkataswamy Naidu, Masulipatam, Andhra Pradesh. Cf. fig. 147.

Fig. 86. Wooden printing block. Courtesy, Shri Pinny Lakshmi Narasimha Rao, Palakollu, Andhra Pradesh. The pineapple was introduced to India by the Portuguese. After the fifteenth century A.D., it became a popular decorative motif in India.

Fig. 87. Wooden printing block. Courtesy, Shri Pinny Lakshmi Narasimha Rao, Palakollu, Andhra Pradesh.

Fig. 88. Wooden printing block with paisley design. Courtesy, Shri V. Venkataswamy Naidu, Masulipatam, Andhra Pradesh. If repeated three times it would form full circle.

CONTEMPORARY BLOCK PRINTED KALAMKARI AT MASULIPATAM

The close link established between the Iranian market and kalamkari production in the Masulipatam region continued until the first decades of the twentieth century. In 1924, however, there was a major set-back when Indian kalamkari was proscribed from the Persian market. The period between 1924 and 1952 was very difficult one for the industry. Fortunately, due to the efforts of Shri V. Venkataswamy Naidu, the craft tradition was not allowed to die. The Swadeshi Movement could provide some fillip, and Shri V. Venkataswamy Naidu took full advantage of this. As secretary of the Krishna District Congress Committee in the years 1940 to 1953, Shri V. Venkataswamy Naidu aroused the interest of Shri B. Pattabi Seetharamayya who also hailed from Masulipatam. Thanks to the intercession of the latter, the All India Handicrafts Board took an active interest in the protection and fostering of this enterprise after 1952.

There are at present five major practitioners of the craft in the Krishna District. At Masulipatam there is the Balyalagudam Cooperative Society founded by Shri V.V. Naidu, the unit of Shri Rekhapalli Parthasarathy and that run by Shri Anamkonda Nanchariah. In the neighbouring villages of Pedana and Polavaram are the units of Shri P.V. Subbaiah (Bundar Kalamkari), and Shri P. Mukkanteswarudu (Aruna Textiles), respectively. A nephew of Shri V.V. Naidu, Shri A.V.G. Jaganath Rao, shifted to Vijayawada but was finding it difficult to operate in 1977 due to lack of infrastructural facilities. Despite the small number of units involved in the practice of kalamkari, the degree of commercialisation and linkages with all India marketing channels are in much greater evidence at Masulipatam than at Kalahasti or Sickinaikkenpet.

DETAILS OF EXISTING TECHNIQUES

There have been several departures from earlier practices in the field of kalamkari today. Mordant is uniformly printed with the block. Indigo dyeing has been virtually relinquished in the past decade and the application of wax resist by kalam is also absent from the procedure. Alizarin has replaced *Seraver (Hedyotis umbellata)* and *Chay (Oldenlandia umbellata)* which had been earlier used for madder. Mordant for outlining in black remains the same. However, whereas in previous times indigo was preferred for dyeing larger areas in black, today

Fig. 89.

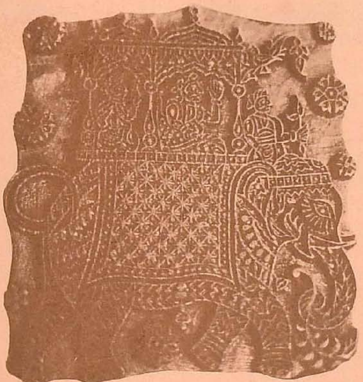


Fig. 90.

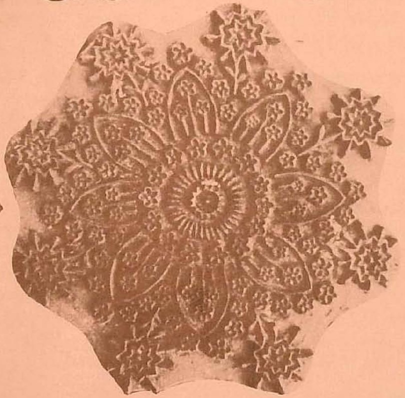


Fig. 91.

Fig. 94.

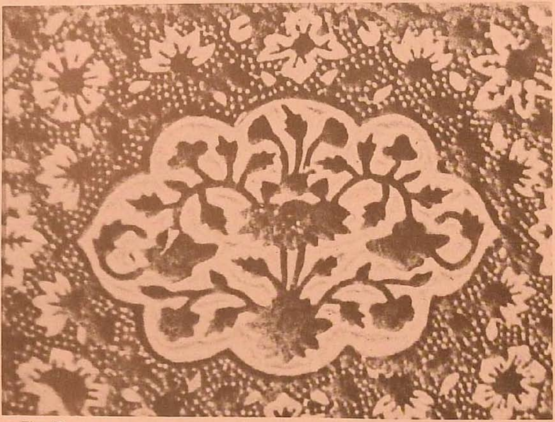


Fig. 92.

Fig. 93.

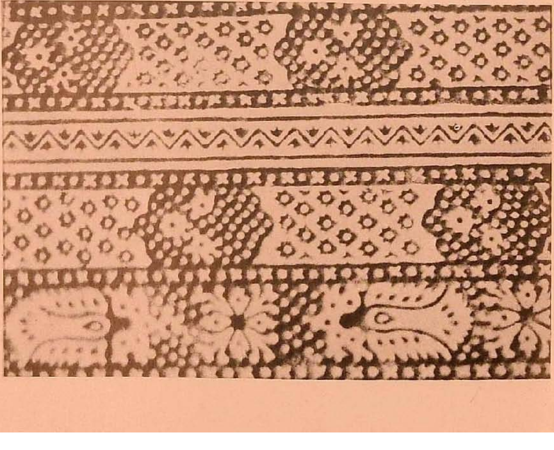


Fig. 89. Wooden printing block. Courtesy, Shri V. Venkataswamy Naidu, Masulipatam, Andhra Pradesh. The elephant motif is traditionally a Hindu one. This block is of relatively recent date.

Figs. 90, 91. Wooden printing blocks. Courtesy, Shri A.V.G. Jaganath Rao, Vijayawada, Andhra Pradesh.

Figs. 92, 93. Wooden printing blocks. Courtesy, Government Museum, Madras.

Fig. 94. Wooden printing blocks. Courtesy, Asle Kalamkari Works, Madras. These are contemporary wooden blocks carved in the tradition of design evolved in the Masulipatam craft region. Note the interaction between European and Persian influences.

Figs. 95-98, 100. Process of block carving at Masulipatam.

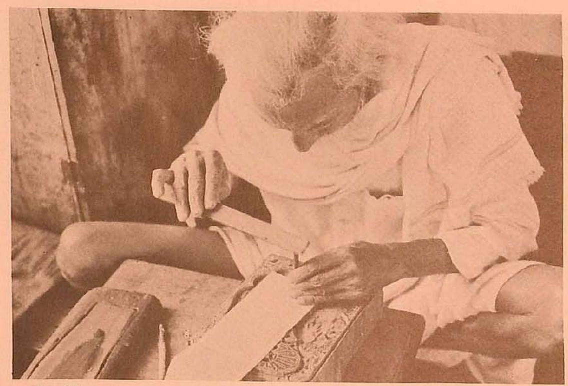


Fig. 95.

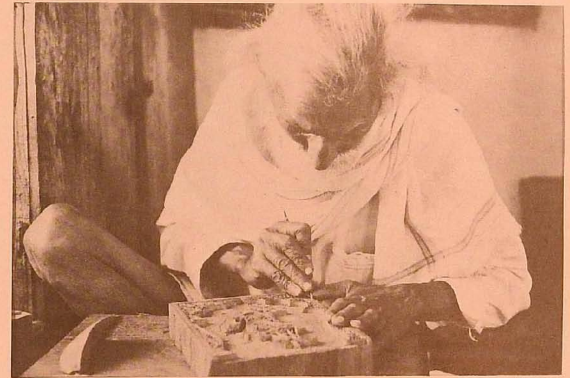


Fig. 96.

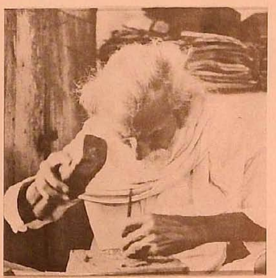


Fig. 97.

Fig. 98.

iron acetate is used for this, despite its known corrosive properties.

In describing techniques, the preparatory steps will be outlined first. This will be followed by a description of actual methods of production. The emphasis has been placed on the craft aspect rather than the angle of socio-economic analysis.

Block Making

Teak is used for the engraving of blocks. It is purchased from timber merchants, the price ranging from Rs. 50 to Rs. 150 per square foot according to quality. Blocks are cut along the breadth of the wood, the minimum width being 6 cm. The wood selected has to be devoid of holes and cracks. The size of the block is dependent on the pattern (for a range of wood blocks see figs. 83-94).

The surface of the selected block is evened with a planer and sandpapered. It is now waxed to ensure absolute smoothness. The design to be carved is outlined on a paper sheet which is stretched out evenly on the wood and gently tacked into place along the edges (fig. 95). A metal instrument, shaped like a pencil with a sharp pointed edge, is lightly hammered along the lines of the pattern (fig. 97). This causes the transfer of the outline onto the surface of the wood in the form of perforated incisions. The paper is removed. Chalk powder is rubbed on the surface. This causes the pattern to come into sharper focus.

The block maker starts to etch the design. Depressions are made in the negative area of the pattern to throw the positive portion into relief (fig. 96). Depressions vary in depth from 2 mm to 5 mm (fig. 100). It is very important to maintain equal pressure while working to ensure constant depth in outline. After the design has been carved on one surface, fingerholds are chiselled on the opposite side to provide a grip to the printer (fig. 98).

Among the tools used by the block maker are chisels of graded quality, files, wooden hammers, a compass like tool with a forked sharp edge used for making small circles on the surface (fig. 82) and others born of local ingenuity, fashioned by the artisan himself. Among these, one is made from the wire frame of a disused umbrella (fig. 102). Pieces of the desired length are cut. One end is then rubbed against a wet stone surface until it becomes sharp (fig. 99). Thin bamboo sticks provide support. These are held in place by tying a piece of rag around them (fig. 101). This implement is used for etching when fine

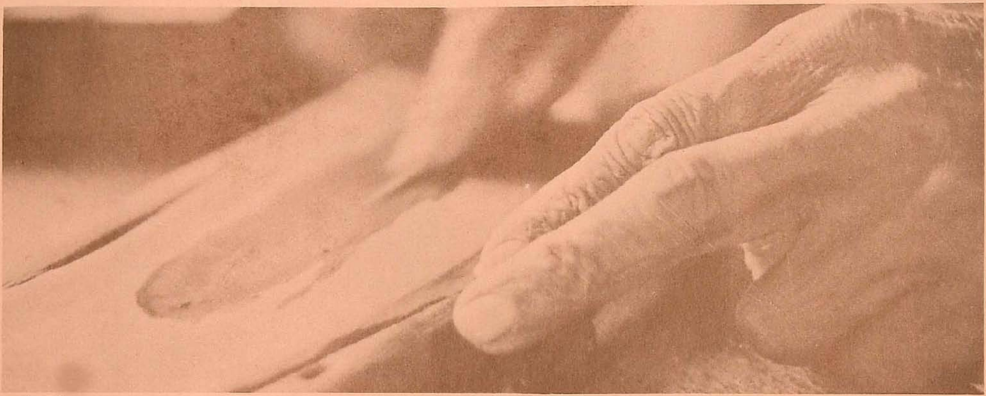


Fig. 99.

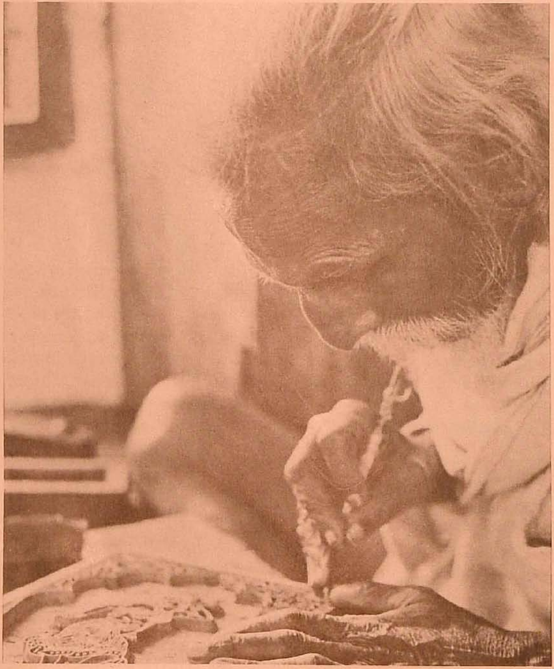


Fig. 100.

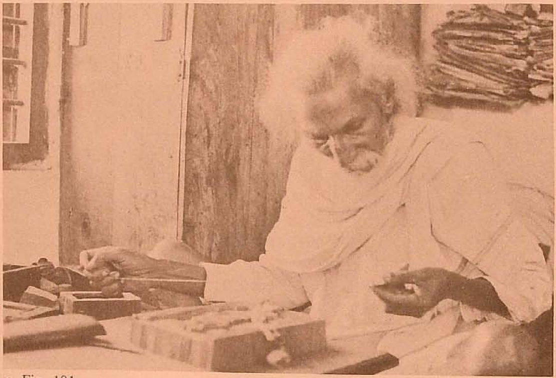
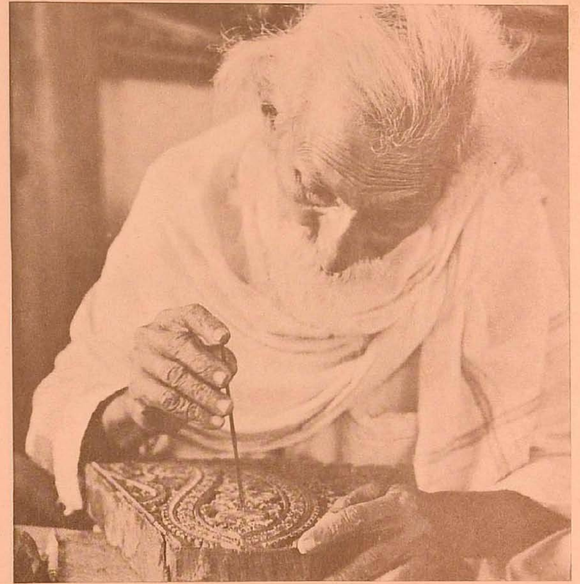


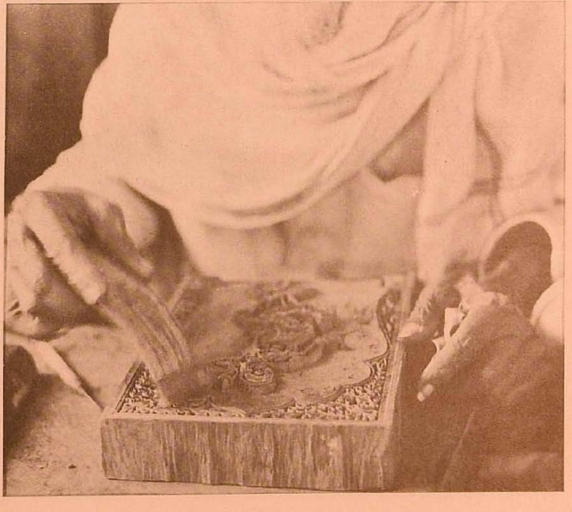
Fig. 101.

Figs. 99-102. Carving of wood printing block – a continuation. Fig. 101 shows the winding of string around the portion which forms the handle of the umbrella frame tool. Fig. 100 shows the finished tool in usage.

Fig. 103. Coir brush used for cleaning purposes in wooden block carving.



▲ Fig. 102. ▼ Fig. 103.



shades of variation are required (fig. 100). To keep the work surface clean, dry shreds of coconut fibre are used to brush away unwanted wooden particles adhering to the surface (fig. 103).

The block maker can either be an independent worker or form part of the kalamkari establishment. The number of blocks required for a particular design depends on the number of shades to be developed.

Preparation of Kalam

A thick bamboo stick about 18 cm in length and about 6 mm in width is made. At one end at the distance of about 3 cm from the point of termination a thick coil of goats' hair felt is coiled around and tied into position. The pens are very simple to make and are fashioned by the painters themselves.

Formulation of Starch

Six kg of rice are cooked on a fire fuelled with coal and wooden logs. The cauldron is stirred frequently until the rice becomes a shapeless mass (fig. 104). The liquid is then filtered into another vessel through a square piece of cloth. While the gruel is being strained, hot paddy juice is also poured in (fig. 106). Cold water is run at the last stage so that the cloth strainer can be evenly squeezed. The solution is allowed to cool for about half an hour. Buffalo milk in the proportion of 5 litres of milk to 6 kg of rice is stirred in (fig. 107). The fat content of the milk provides added stiffness to the starch and helps it to spread evenly. It also prevents dissipation in the strength of yellow colour which is painted by ensuring that it is concentrated on the top surface of the fabric.

Extraction of Yellow Dye

This is prepared from the dried flowers called *Aldekai* (Telugu) or *Kadukai* (Tamil) of the myrobalam, *Terminalia chebula*. The price ranges between Rs 9.50 and Rs 10.00 per kg. The flowers are put in a stone pot and pounded with a wooden rod. The use of metal is avoided as any stray traces would spoil the clarity of colour. Water is added to the powdered Kadukai and the solution is boiled for at least 2½ hours. The liquid is stirred during this process. After it has cooled, it is filtered and kept ready.

Fig. 104. Fig. 105.

Fig. 106.

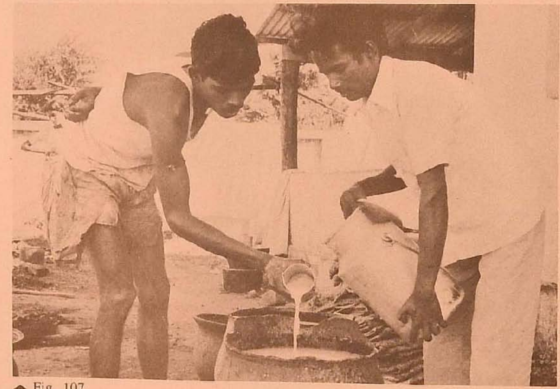


Fig. 107.

Fig. 104. Testing consistency of rice used for making starch.

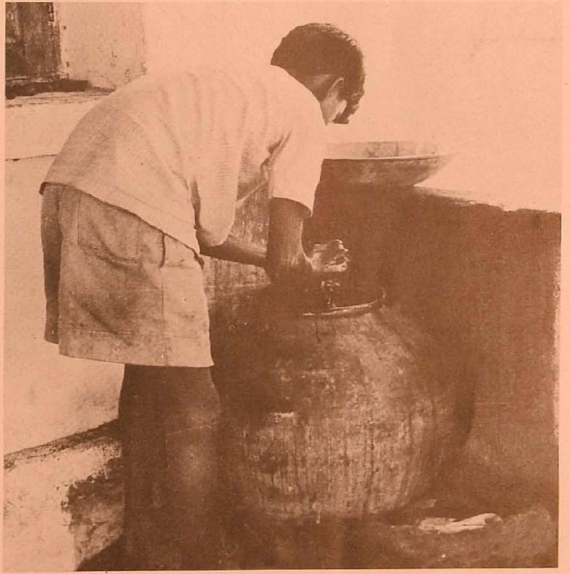
Fig. 105. Pounding of myrobalam. Note usage of stone and wood.

Figs. 106, 107. Stages in preparation of starch.

Figs. 108-113, 116. Stages in the preparation of iron mordant.

Fig. 108. Shows the weighing of iron filing.

▲ Fig. 108. ▼ Fig. 109.



Myrobalam for Tanning

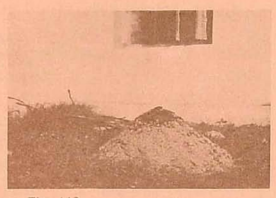
Myrobalam fruit is soaked for about one hour. The approximate quantities of ingredients used for 40 m of cloth are 1 kg of myrobalam fruit to ¼ litre of fresh buffalo milk. After the fruit has softened, it is pounded with a wooden rod in a stone pot with occasional additions of water until it is mashed (fig. 105). Metal implements are avoided for the same reason as in the case of preparation of yellow dye. After mashing, the solution is further diluted with cold water and is then filtered through some fine fabric.

Iron and Alum Mordants

Iron strips, usually the kind used for crating, are accumulated. The proportions of ingredients used are 36 litres of salt water, 12 kg of jaggery, 21 kg of iron strips (fig. 108), and one sack of paddy husk. The jaggery is of low grade, the cost being Rs.1.50 per kg. The price of a sack of paddy husk ranges from Rs.4 to Rs.5. Paddy husk and iron strips are piled in alternative layers (figs. 110, 113), and set aflame with charcoal and cow dung cakes. This is allowed to smoulder through the night. The following morning the iron strips are retrieved, washed and scrubbed with stone to remove the rust (fig. 111). At Kalahasti rusted iron filings are used. The reason for derusting at Masulipatam is not clear, but one explanation may be that the corrosive qualities of iron acetate are possibly greater in the case of usage of rusted iron filings. The work of removal of rust is usually done by women. The cleaned strips are placed in a barrel shaped brass pot (fig. 109). A solution of jaggery (fig. 112) and salt water is made and poured on the iron filings. Particular care is taken to procure water from the Krishna river in the belief that this water has special properties. The mouth of the pot is made air tight. The presence of jaggery sets off a process of fermentation which helps to dissolve the iron pieces. The fermentation is allowed to proceed for 21 to 24 days. All these exercises take place in an uncontrolled environment, hence the chance element is strong. For good measure a small puja is performed to help towards a successful conclusion (fig. 116). The iron mordant is called *kasam*.

Dry alum crystals are pounded to powder (fig. 114). Water is added in the proportion of 4 litres of water to 3½ kg of alum. The liquid is allowed to boil with occasional stirring until it has been reduced by half. The alum mordant is called *karam*. Clarity in the shade of red depends on the purity of alum used. Admixture of iron in any form leads to a darkening of colour. It is for this reason that iron implements and utensils are avoided.

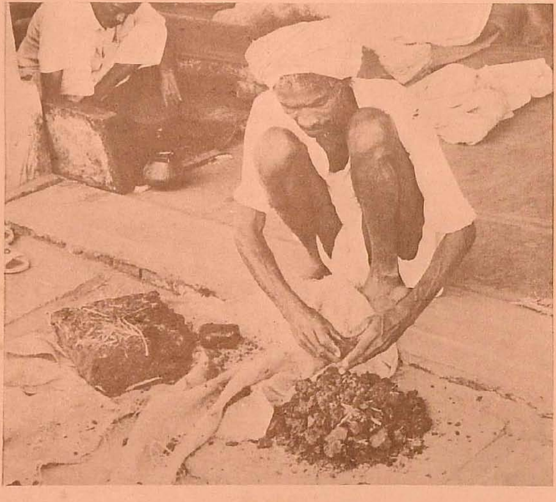
▲ Fig. 110.



▲ Fig. 113.

▲ Fig. 111.

▼ Fig. 112.



▲ Fig. 114.

▲ Fig. 117.

▲ Fig. 115.

▼ Fig. 116.

▲ Fig. 118.

Figs. 108-113, 116. Stages in the preparation of iron mordant.

Fig. 112 shows jaggery being separated for admixture required in the fermentation process.

Fig. 114. Pounding of alum.

Figs. 115, 117, 118. Folding and wringing. Fig. 115 shows method of initial folding.

Bleaching and Washing

This is the first step in the actual dyeing operations. The basic material in kalamkari is unbleached cotton fabric. In previous times handloom material was used. At present, with the exception of saris for which Venkatagiri handloom fabric is utilised, mill material is preferred as it is smoother in texture and tends to absorb less dye. Fairly thick quality cloth ranging in width from 150 to 225 cm is used for yardage and piece-goods, such as bedspreads.

The unbleached material is soaked in a solution of cow dung and water for 5 to 10 minutes. It is then wrung out (figs. 115, 117, 118) and dried in the sun. This process is repeated three times. Because of the leafy diet of the cow, the dung contains sodium carbonate, a bleaching agent. As it is a natural product it does not weaken the fibre and repeated procedure leads to whitening of the cloth without deleterious side effects. The cloth is also cleansed of starch and other substances during the cow dung process. Since the current taste is for an off white background colour, the cloth is dipped in cow dung only once as a cleansing and de-starching rather than a bleaching process. The fabric is then washed in clean water and dried in the sun.

Application of Myrobalam

The filtered abstract of myrobalam fruit is diluted by the addition of about seven to eight buckets of water. The material is dipped into this solution, removed immediately, squeezed out and dried in the sun. The tannin in the myrobalam plays a special role. On reaction with iron salt a black colour is produced. When the tannin reacts with alum it improves the fastness of the red dye. It also helps the cotton fibre to absorb the iron and alum salts more evenly. The fat content of the buffalo milk imparts a certain stiffness to the fabric. This helps to prevent mordant from smudging and provides an easier work surface during printing. In previous times, after tanning the cloth would be beaten with a wooden malet. This was done for two reasons: to soften out knots in the hand-woven material and make it smooth, and secondly, to eliminate any impurities in myrobalam. Now that mill cloth is used, beating is no longer required for softening and this stage has been deleted at Masulipatam although occasionally performed at Kalahasti.

Printing of Iron and Alum Mordants

The printing is done on a long wooden table at an elevation of about one foot from the ground. The surface of the table is covered with gunny cloth, over which a damp cloth is spread. The fabric to be printed is stretched out on the table. The damp under surface prevents the cloth from slipping during printing. Mordant is placed in a printing pad (fig. 140). The basic structure for this is a rectangular tray made of deodar or teak wood. A loose bamboo frame is made which fits breadthwise into the bottom of the tray. There are interstices between the bamboo strips (fig. 142), which control the flow of mordant. Above this is a sponge surmounted by a piece of cloth. If a larger surface area has to be printed, a thinner layer of cloth is placed on top as an increased quantity of mordant is required. If the pattern is fine, additional layers of cloth are placed so that the necessary delicacy in outline is obtained.

The printer sits cross-legged at the table with the pad within easy reach. Mordant is poured from time to time onto the pad from a brass *lota* (mug). The bamboo separators act as the base from which the sponge layer absorbs mordant in limited quantities throughout the printing operation. The woollen cloth on top acts as a kind of blotter so that only the surface residue from the sponge layer permeates through to establish contact with the block. After wetting the surface of the block with the mordant solution, the printer presses it down onto the fabric (fig. 141). To ensure deeper penetration of mordant, the block is hammered down after each impression with a round edged hammer. To soften the impact, the surface of the hammer is covered with a cloth padding (fig. 143). A great deal of precision and skill are required to achieve necessary fineness in block printing. There should be no overlapping in block impressions to ensure even flow in outline. The pressure brought to bear on the block should be uniform as on this depends tonal stability in dyeing.

The printing of the iron mordant precedes that of alum. The prepared substances are thickened with gum to facilitate printing. At Kalahasti, where the kalam alone is used, no thickening agent is required. If cloth is of a fine quality there is a larger admixture of gum. Gum does not play any role in the development of colour.

When the iron mordant impression is made on the myrobalam treated cloth, the tannin in myrobalam reacts to the iron acetate and a black colour develops. In order to test the depth of black colour, an initial impression may sometimes be made on a sample piece. If jaggery is not of the right proportion, the colour may tend towards red.

Since the alum solution is colourless, a fugitive colour is added so that the outlines may be visible while printing. In earlier

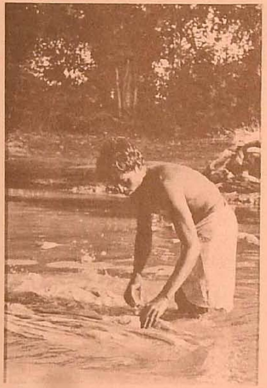


Fig. 119.

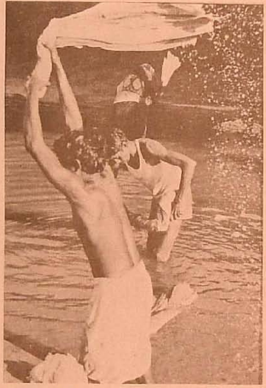


Fig. 120.

Fig. 121.

Fig. 122.

Fig. 123.

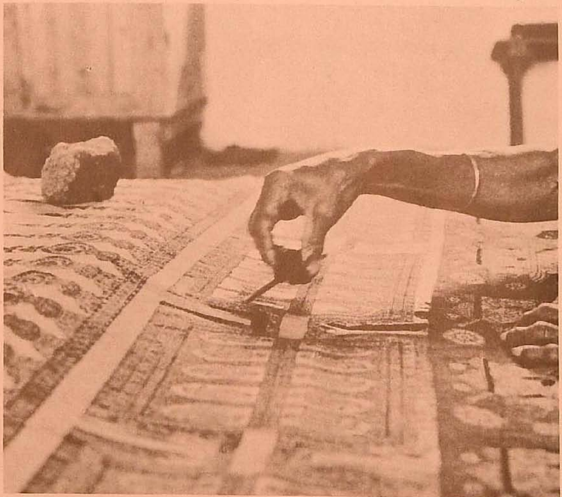


Fig. 124.

Fig. 125.

Fig. 126.

Fig. 127.

Figs. 119, 120. Degumming and washing operations.

Figs. 121, 126, 127, 144. Alizarin boiling. Fig. 126 shows *Jajakku* leaves which have fallen around the base of the pot.

Figs. 122, 123. Process of painting yellow colour.

Fig. 124. Final dipping in alum.

Fig. 125. Cloth being stretched out prior to placement on ground for drying.

times sappan wood was used. Now vermilion *(sindoor)* is utilised. If deeper shades of red are to be developed a more highly concentrated solution of alum is used. A combination of alum and iron mordants used in different proportions can yield a range of colours stretching from chocolate to violet. After mordant printing the cloth is kept for two or three days to ensure thorough drying. On termination of printing the blocks are washed in cold water, wiped with rag and stored. Previously there was no system of filing of blocks according to pattern but some attempts in this direction are now in evidence.

Degumming and Washing

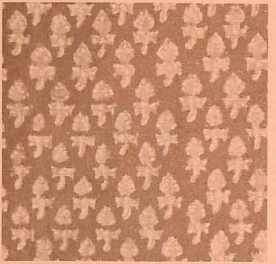
After mordants have dried, the very delicate operation of degumming has to take place. The reaction of mordant is limited to the period when it is in a liquid stage. The degumming has to be so effected that there is no smudging of outline for this would lead to smearing of mordant and unwanted development of colour. The cloth is taken to the river in the early hours of the morning and left in the water for about two to three hours (fig. 119). Care is taken to make certain that the cloth is evenly stretched out. This ensures that all unwanted mordant is removed. The remaining impurities including residue of gum, which would affect the clarity of colour, are then removed by vigorous beating on stones by the river bed (fig. 120). The fabric is now dried in the sun.

Boiling for Alizarin

Alizarin, procured from the local market, is dissolved in cold water (fig. 121). A large pot of water is placed on a brick fire place. The alizarin solution is added to the boiling water, the liquid being stirred with a wooden rod (fig. 144). The mordant printed fabric is then completely submerged in the pot and allowed to boil for one hour. The workers swirl the fabric to ensure that all parts are evenly permeated (fig. 126).

The leaves of *Jajakku (Memecylon edule)* are added to the solution. This acts as a carrier and hastens the dyeing process. After the red colour has developed, the cloth is taken out, squeezed and dried in the sun. During this process not only is the red colour developed (fig. 127), as a result of the combination of alum and madder, but alizarin also contributes to fixing the black colour which has emerged at a previous stage. Portions of the cloth which had not been treated with alum imbibe a pinkish colour, but this is fugitive and can be expelled by subsequent washing and bleaching.

If bleached background is desired, the cow dung process is



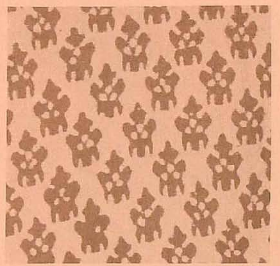
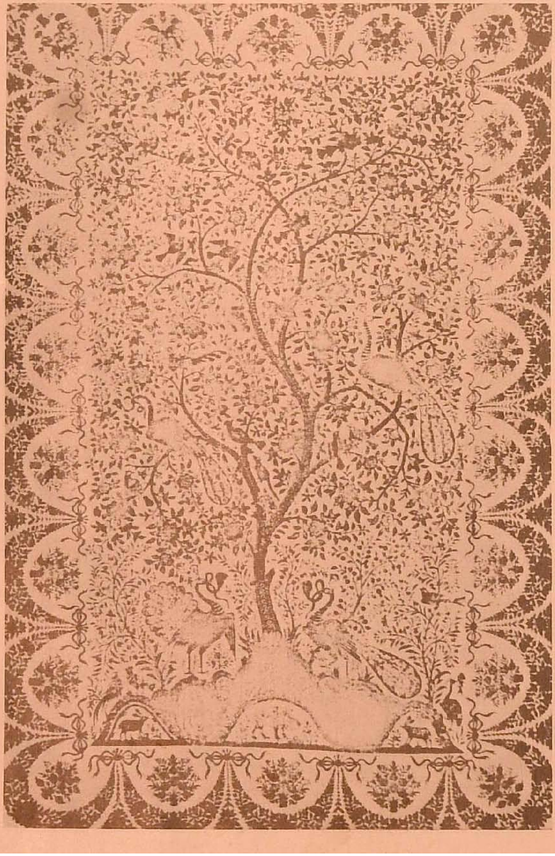


Fig. 128. Fig. 129. Fig. 130.



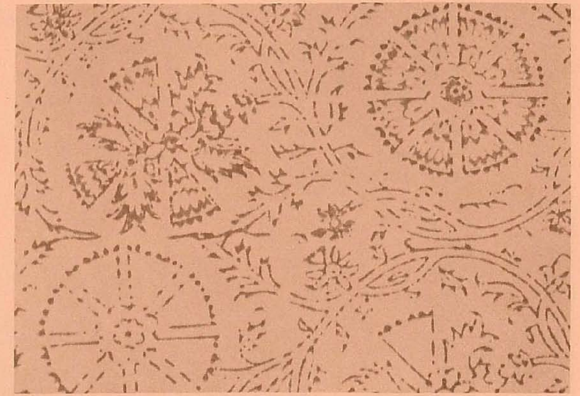


Fig. 131.

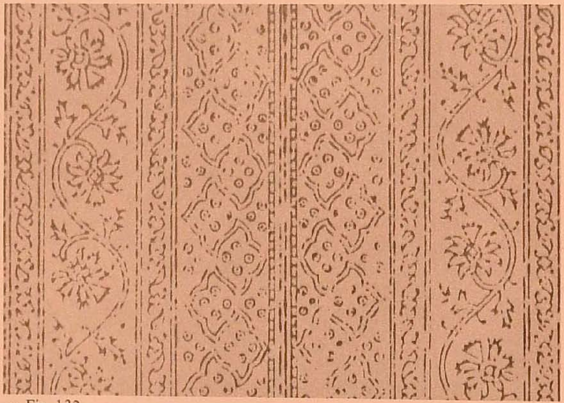


Fig. 132.

Fig. 128. *Buteh* motif, Bagru. From extant sample.

Fig. 129. Tree of Life, Farrukabad.

Fig. 130. Repeat pattern, Bagru. From extant sample.

Figs. 131, 132. Impressions from blocks taken at Masulipatam. Creeper pattern and ornamentation through the grid apparent in designs of Masulipatam.

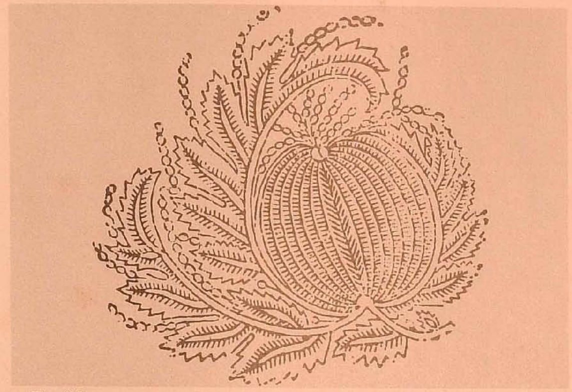


Fig. 133.

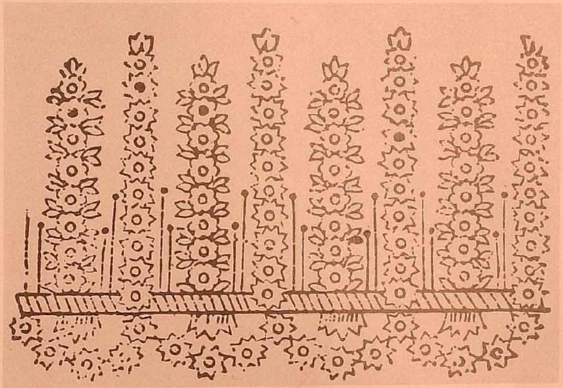


Fig. 134.

Figs. 133, 134. Border designs. Courtesy, Shri Lakshmi Narasimha Rao, Palakollu, Andhra Pradesh.

repeated. Since consumer preferences today tend towards unbleached background colour, the cow dung process has fallen into disuse. The processes associated with indigo dyeing took place after alizarin dyeing. Although resist dyeing for indigo is still practised, it is a relatively rare operation and was not documented. The indigo process has not been included in the present monograph.

Starching and Application of Yellow Dye

The fabric is steeped in the prepared starch. It is then squeezed out and dried in the sun. This is to prepare the cloth for the painting of the yellow dye. Starching prevents diffusion of yellow colour by preventing undue seepage onto the reverse side.

This is the only stage when the pen is now used at Masulipatam. When the cloth was dyed in indigo the colour green was imparted by the application of yellow over blue.

The prepared myrobalam flower solution is kept in a lota. The kalam is dipped into the solution, the liquid being absorbed by the coiled felt. The kalam is held at vertical angle to the fabric. The coiled felt is held between forefinger and the thumb (fig. 122). An even pressure is sustained so that the dye trickles down the base onto the cloth. In case any excess colour is found it is blotted off with the felt portion of the pen (fig. 123).

Yellow painting is considered a relatively unskilled job. It is performed either in the establishment itself or is done at home by part time women workers who are paid according to the number of articles painted.

Final Processing

Alum crystals are pounded, cool water is added and stirred well. The fabric is then submerged in this solution. The excess yellow colour runs off and all colours are now fixed (fig. 124). If the yellow remains fugitive after the final dipping in alum this may be accounted for by either one of two reasons: that the myrobalam flowers were inadequately boiled or the yellow solution was not sufficiently thick.

The last stage is washing with soap after which the cloth is dried in the sun (fig. 125). Because of the ingredients used during the process of dyeing, the fabric has a very characteristic flavour, the stamp of authentic kalamkari.

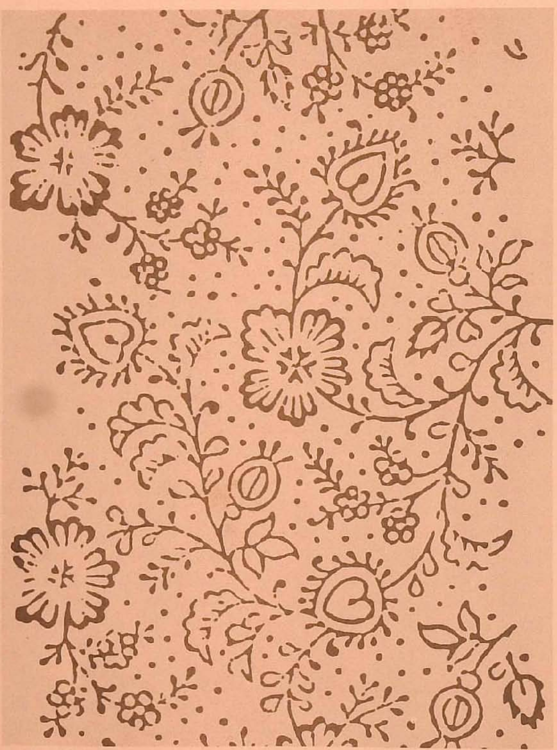


Fig. 135.

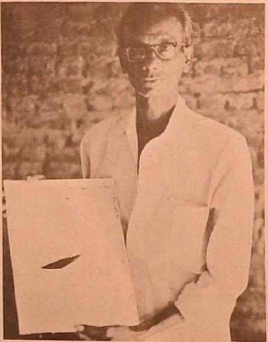


Fig. 136.

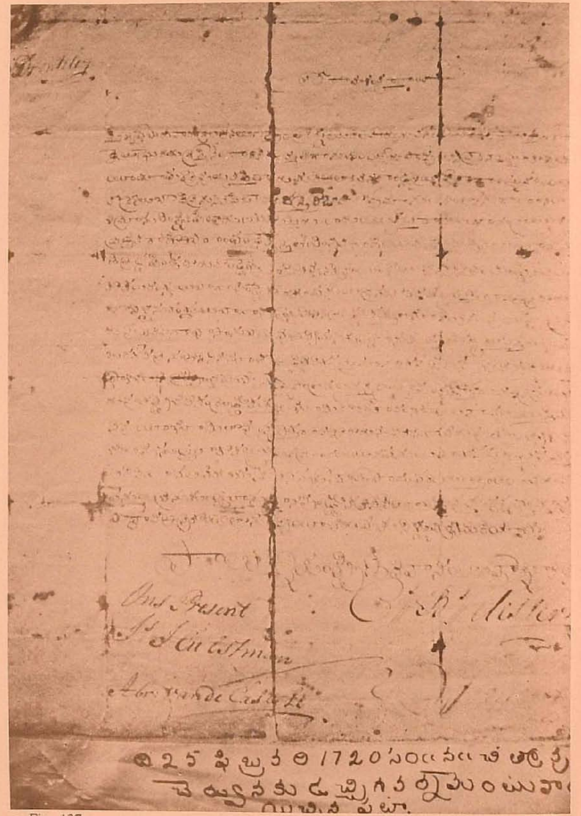


Fig. 137.

Fig. 135. Yardage design. Courtesy, Shri Lakshmi Narasimha Rao, Palakollu, Andhra Pradesh.

Fig. 136. Shri Lakshmi Narasimha Rao with the document granted to his family by the Dutch East India Company.

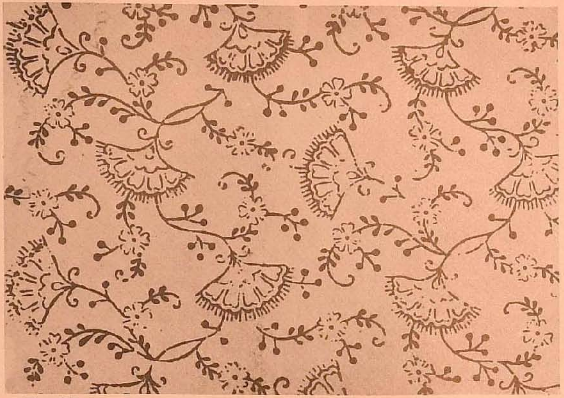
Fig. 137. Close up of the document. Note the stamp of the Dutch East India Company (V.O.C.) on the top left hand corner. Dr. M.A. Nayeem, State Archives, Hyderabad, very kindly had the document translated and provided the author with the following abstract:

Date of document: 25.2.1720

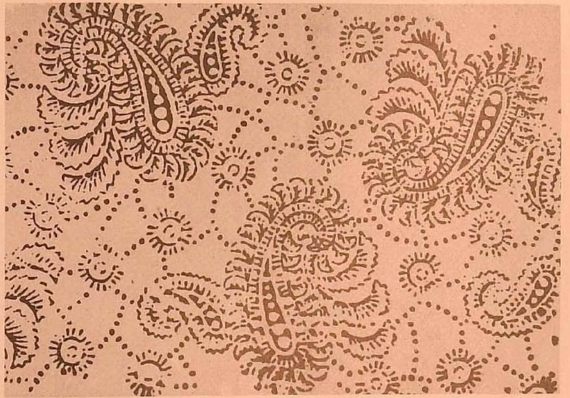
Issued by: Dutch administration at Nagapatam.

Nature of document: *Patta* to individual merchant.

Contents of document:
One, Kondepudi Acchanna, has petitioned the Dutch Governor to provide land for digging a large well for purposes of dyeing. The Dutch administration had, accordingly, granted 2 *kattula* (kattula being a variable unit in land measurement) near Chettaravu tank to the south of Mochupalle village. It was a hereditary grant which could be enjoyed by the successors of Kondepudi Acchanna.



▲ Fig. 138.



▲ Fig. 139.

Figs. 138, 139. Yardage designs. Courtesy, Shri Lakshmi Narasimha Rao, Palakollu, Andhra Pradesh.

FEATURES OF DESIGN AND CRAFT CONTENT

Even though motifs are now restricted to those developed for the Iranian market, workmanship is of a high order. Continued usage of vegetable type shades has resulted in muted but harmonious colour tones. There has been no admixture of blocks brought in from other craft regions such as Rajasthan or Kutch. The blocks bear a marked resemblance to those of Farrukabad, but this may be because both were geared towards the satisfaction of Islamicised tastes. At Masulipatam, the link lay in the connection with Iran whereas at Farrukabad it may have evolved as a result of the patronage provided by Mughal nobility. The traditional prints of Bagru also show the impact of Islamic taste, but the manifestation here has taken the form of the *buteh* motif, flower motif of Persian origin (fig. 128), and continuous repeats of a single small motif (fig. 130).

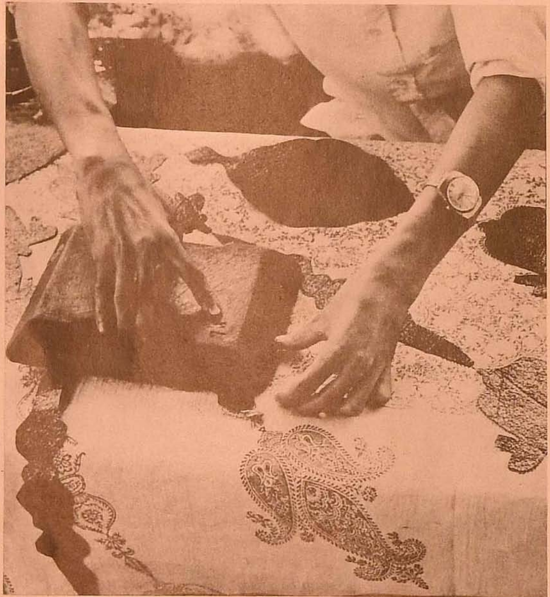
The oldest motif at Farrukabad is a block printed tree of life (fig. 129). According to local craft tradition, this goes back to seven generations. Allowing a span of 40 years to each generation this would lead back to approximately 1690 A.D., a perfectly credible date for the introduction of this motif. Items could well have been executed according to samplers supplied, which would explain their similarity to the Masulipatam prototype. The more formative influence appears to have been the design of the Kashmir shawl in the eighteenth and nineteenth centuries. Not only was the paisley put to many imaginative uses, but there was a category of printed motifs derived exclusively from *jamavar*. The Kashmir shawl and the paisley did influence Masulipatam kalamkari (fig. 151), but not to the same extent as appears to have been the case at Farrukabad[1]. The affinity between Masulipatam and Farrukabad in contemporary times lies in a basic similitude in approach to the question of ornamentation of surface area. Both adopt the convention of a continuous intertwining creeper pattern or embellishment through grid effect (figs. 131, 132). The characteristic feature of Masulipatam is the intricacy with which the inner surface of each motif is further ornamented in delicate black tracery.

The range of colour is extremely limited, and the spectrum which can be developed from the iron-alum combination of mordants has been left virtually untouched. Unlike Sickinaikkenpet where, despite the low standard of aesthetic content, there is a link between a specific product and its pattern, at Masulipatam there is only one range of patterning. Variation

[1] *For Farrukabad block printing see Kokila Mawani,* ***A Study of Indo-Persian Printing of Uttar Pradesh, Tanda, Lucknow and Farrukabad****, report submitted in typescript to the All India Handicrafts Board, pp. 3, 5, 6.*

Fig. 140.

Fig. 141.



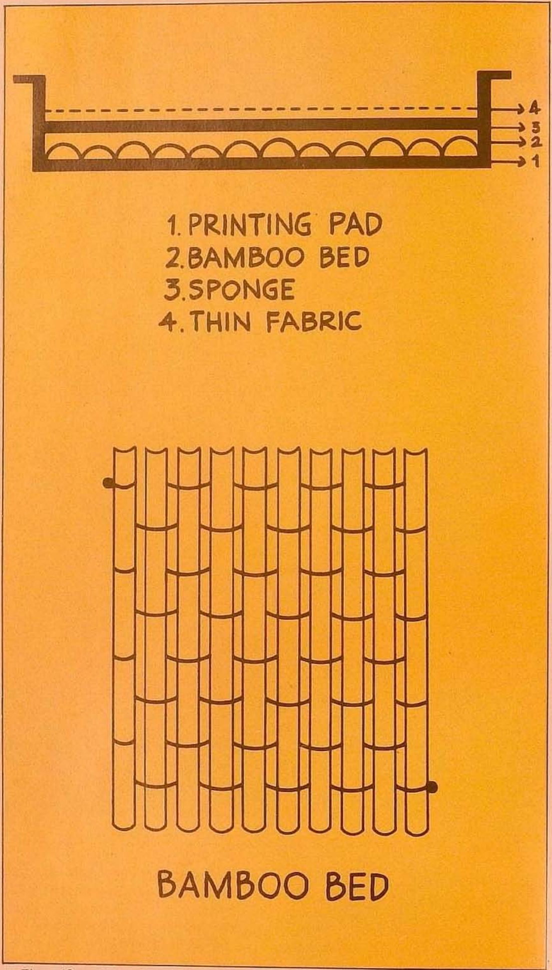


Fig. 142.

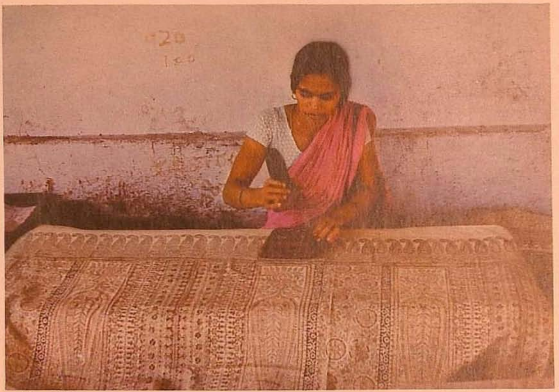


Fig. 143.

Fig. 144.

Figs. 140-143. Process of block printing of iron and alum mordant.

Fig. 144. Alizarin boiling.

is provided by the scale of individual motifs. The basic motif would remain the same whether the material was intended for yardage, for shirting, for a bedspread or for a sari. Some of these patterns may be found in figures 29, 32, 61, 65. These may be compared with some block impressions collected from old blocks in the possession of Shri Pinny Narasimha Rao of Palakollu (figs. 133-135, 138, 139). The family of Shri Pinny had worked for the Dutch East India Company in the first decades of the eighteenth century and a document issued by the Dutch East India Company is a valued family possession (figs. 136, 137). The range of designs from these blocks could adapt very well to yardage. During the seventeenth century, the highly calendered lustrous finish given to kalamkari proved very appealing to European tastes. It had a functional advantage as well in the sense that it tended to repel dust, thus obviating frequent recourse to laundering. It is doubtful if a similar finish will find acceptance in the modern market.

Undoubtedly if a revival of the earlier historic range in pattern is to take place, indigo dyeing has to be revived[2]. However, the present method of domestic development of dyes is wasteful both in effort and raw material. Prepared dyes made under controlled conditions which can be easily reconstituted by the artisan need to be developed and placed on the market.

CONTRIBUTION OF NELLIE SETHNA

It was fortunate that at a time when the All India Handicrafts Board was extending help and encouragement to the kalamkari industry at Masulipatam, a well known designer, Nellie Sethna, should also have devoted her talents towards the restructuring of traditional kalamkari design. As a student of the Regent Polytechnic, London, during the years 1954 to 1956, Nellie Sethna had visited the Victoria and Albert Museum to study the rich collection of historic Indian textiles. Since that time she had been very attracted by the kalamkari samples made in the Masulipatam area for the Persian market. When the All India Handicrafts Board requested Nellie Sethna to devote some attention to developing new layouts for products in kalamkari she readily agreed. She was subsequently awarded the Homi Bhabha Fellowship between the years 1972 and 1974. This enabled her to put in concentrated effort and undertake necessary research in London and Isfahan.

[2] *Shri K. V. Chandramauli, All India Handicrafts Board, Bangalore, has already made several recommendations in this field.*

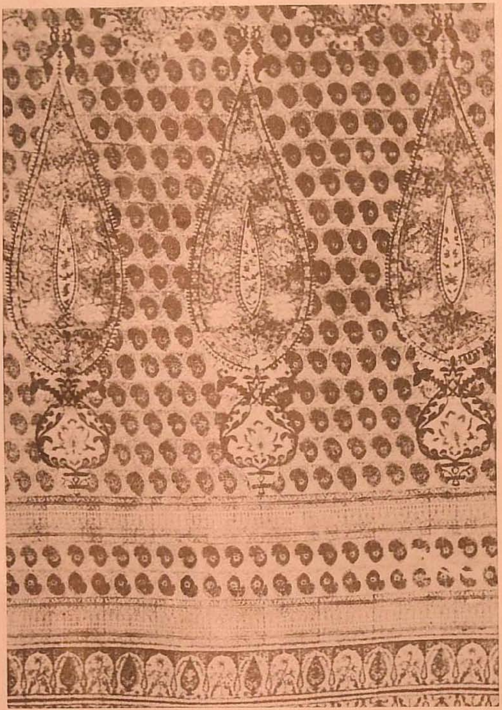
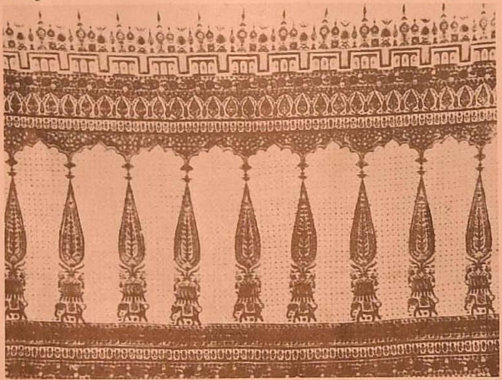


Fig. 145.

Fig. 146.



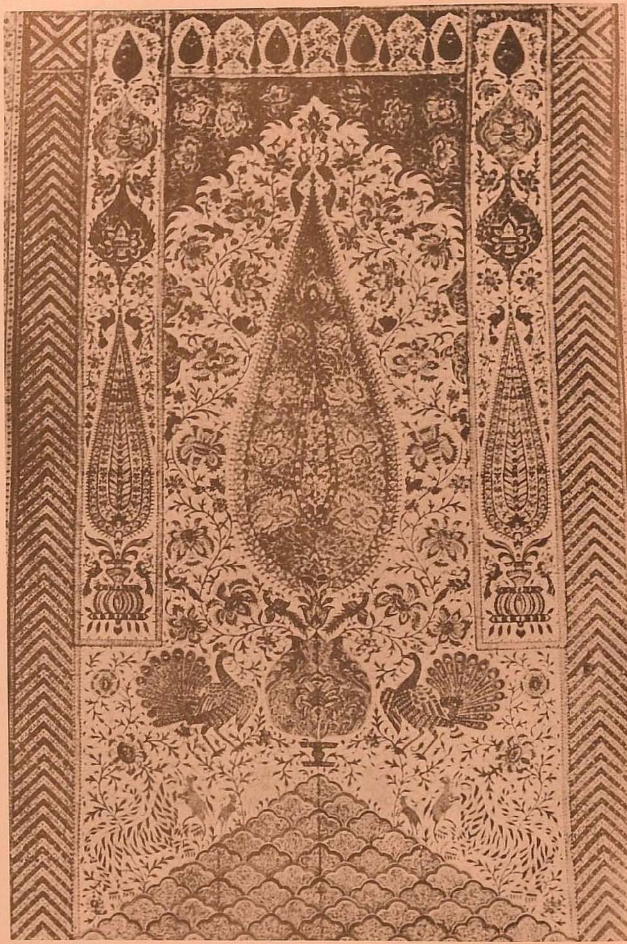
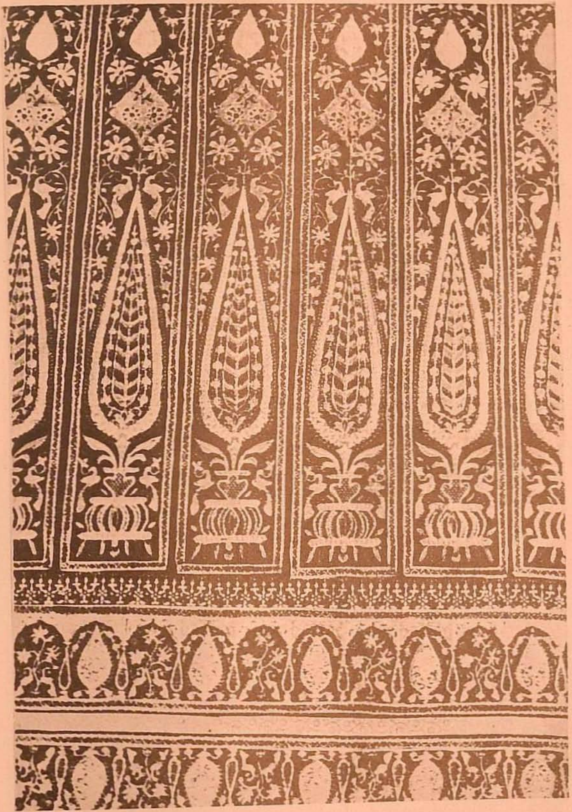


Fig. 147.



• Fig. 148.

Fig. 145. New layout with usage of the pandu. Note paisley motif in the background.

Fig. 146. New layout with stambha motif. Note the introduction of the elephant, a Hindu motif, amidst a predominantly Islamic configuration of form and outline.

Fig. 147. Note resemblance with fig. 65. The central motif is the *pandu* while the cone in the side panel is called the *stambha*.

Fig. 148. New layout with stambha motif.

At London she carefully examined the prayer mats and wall hangings at the Victoria and Albert Museum. This reinforced her assumptions about the high levels achieved in the past in contrast to the current ebb in creative effort. Her visit to Isfahan brought home the strong link in design with Masulipatam. Certain preferences which she had already formed now received further emphasis. She had all along felt that the beauty of Masulipatam kalamkari lay in the muted tones of the vegetable colours used. The highly bleached background and inept handling of indigo were found unduly obtrusive in the modern samples. The contemporary Isfahan kalamkari had dull background shades and indigo was no longer used. Both these elements were to be basic to kalamkari design conceived by Nellie Sethna.

The prayer mats and wall hangings executed for the Iranian market fell into the category of piece-goods. This meant that each item was individually designed. The pattern which was integral to the prayer mat was the central space conceived in terms of the mihrab outline, flanked by the cone or cypress tree motif. The pattern was determined by the shape and the usage to which the item was put (figs. 145-148, 155). If the motifs alone were of interest from the point of view of design, it was not necessary to repeat the traditional format. Individual motifs could be regrouped in new ways. To expect the artisans in Masulipatam to conceive of such a change was to demand too much in conceputal terms. Such a transition was an easy one for a trained designer.

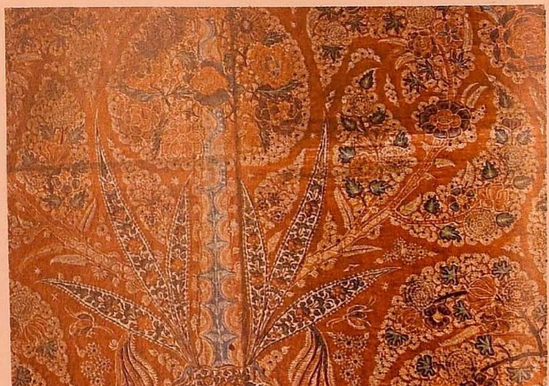
Apart from prayer mats and wall hangings, kalamkari was also fashioned for usage in public baths or hamams. These were used as towels. Here again, the item was fashioned in the form of piece-goods (see figs. 29, 32). Elaborate borders were dyed at the two edges, the central area being more lightly ornamented. The paisley motif, which comes into strength in the field of Indian design in the nineteenth century, was a popular one in this category called khadife in Iran. As has been stated already, the illustrative samples have been drawn from Iran, but craftsmen in Masulipatam claim to have made similar items and have the blocks in their possession. Here again, the same feat had to be repeated. Khadife have been replaced by Turkish towels in Iran but the blocks could be put to new use.

The three motifs chosen by Nellie Sethna in the innovations conceived by her were the *stambha*, the cone or cypress tree motif, the *pandu* or the central motif placed within the mihrab (fig. 147) and the third was the large paisley (see fig. 88). All three motifs were freed from the conventional format and rearranged in different ways. If the design so required it, an individual motif would be enlarged (figs. 145, 146, 148).

Fig. 149.

Fig. 150.

Fig. 151.



▲ Fig. 152.

Fig. 149. Bedspread manufactured at Asle Kalamkari Works, Saidapet, Madras. Photograph. Courtesy, Radha Silk Emporium, Madras.

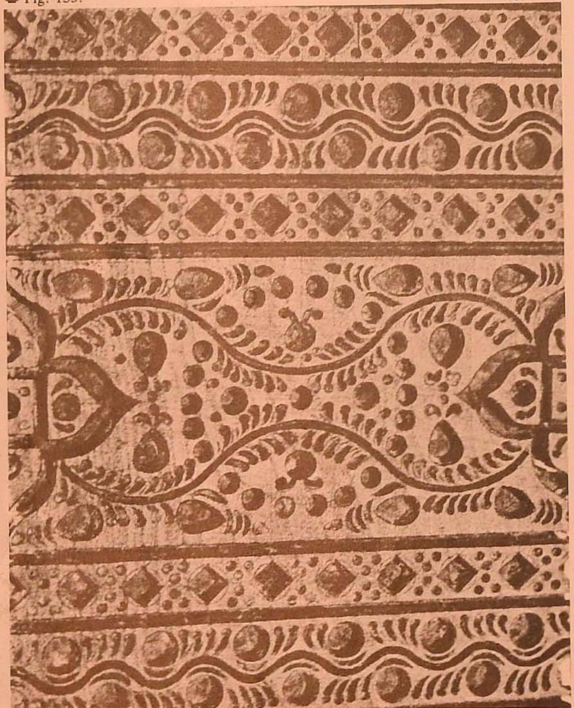
Fig. 150. Courtesy, Shri G. Krishna Reddy, Kalahasti.

Fig. 151. Paisley motif in kalamkari. Courtesy, Victoria and Albert Museum, London.

Fig. 152. Figurative kalamkari from the collection of the Raja of Puri. Courtesy, Orissa State Museum, Bhubaneshwar. The exact provenance of this piece is not known but it appears to have been executed in the Tanjore craft region.

Fig. 153.

Fig. 154.



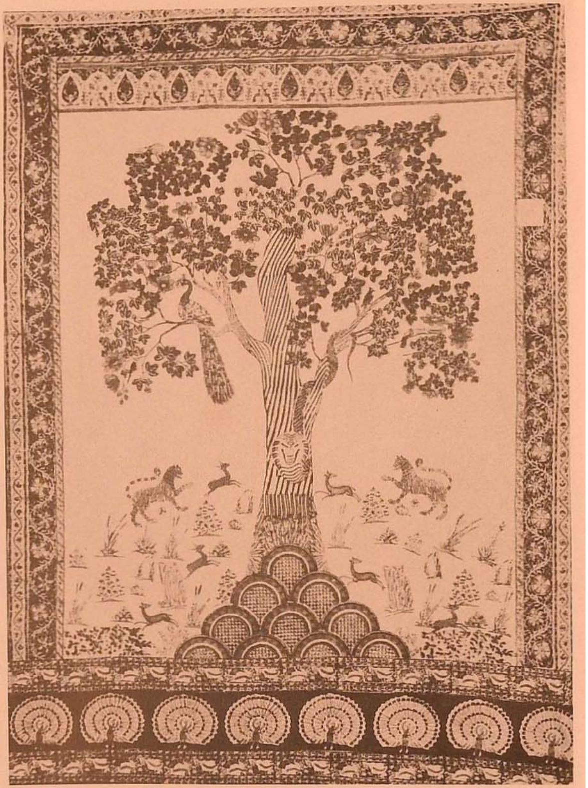


Fig. 155.

Fig. 153. Sunken dye vats. Asle Kalamkari Works, Saidapet, Madras. In the past the only dye which was stored in this manner was indigo because of the necessity of ensuring stable temperature conditions. Such conditions were not necessary for the fermentation of iron acetate.

Fig. 154. New block carved after earlier prototype at the Government Museum, Madras. Courtesy, Kalamkari Unit of the Kalakshetra Craft Research and Education Centre, Tiruvanmiyur, Madras.

Fig. 155. Tree of life. Contemporary. Courtesy, Shri P. Mukkanteswaradu, Polaveram, Krishna District.

Several exhibitions were arranged in different parts of the country and the new layouts and colour schemes created by Nellie Sethna were much appreciated. An increased awareness was created. In Masulipatam, craftsmen have themselves begun to arrange new layouts with traditional blocks. Shri V. Subramaniam, a relative of Shri V. Venkataswamy Naidu, has created a few patterns of startling beauty. Some attempt has been made to revive the tree of life layout (fig. 155). It is, however, difficult for the craftsmen to infuse the necessary input. The Weavers' Services Centre at Vijayawada can fill the vacuum but in creating innovation the unique contribution of Nellie Shethna needs to be kept in mind—she so steeped herself in the tradition that all the springs of renewal were found within the source itself. No extraneous additions were required. This is why her impact on contemporary kalamkari has been so pervasive.

BLOCK PRINTED KALAMKARI UNITS IN MADRAS

Earlier documentation attests[3] to the widespread practice of block printing in the region previously known as Presidency of Madras of British India. The Government Museum, Madras, has a rich collection of these blocks. A decline appears to have set in and by the second quarter of the twentieth century there was little trace of continued activity.

Shri S.G. Venkatarama Aiyar, a dealer in chemical dyes at Salem, decided to leave the profession and enter the field of block printing. In 1951 he set up an establishment at Saidapet, Madras. He appears to have been among the first entrepreneurs to adapt Masulipatam block printing to dyes which were probably of synthetic origin. This was very skilfully done and the tone of the chemical colours employed approximated closely to those of vegetable colours (fig. 149). The blocks used are very similar to Masulipatam blocks (see fig. 94). Several have been carved by a local block maker, a Vishwakarma Brahmin, Kuzhandai Velu, who had earlier done wood carving for temple carts at Tirupur and is currently a resident of Madras. The unit called Asle Kalamkari Prints and Batiks is now run by Smt. Rukmini Ammal. Although the colours appear to be of synthetic origin, traditional practices are still followed, as may be seen by the earthenware containers in which dyes are kept in the backyard (fig. 153). Several items made at this unit are retailed through Radha Silk Emporium, Madras.

The second unit where traditional block printing is being undertaken is the Kalamkari Unit of the Kalakshetra Craft Research and Education Centre, Tiruvanmiyur, Madras. This was established in 1978. Masulipatam blocks are used. A few of the old wood blocks from the collection of the Government Museum, Madras, have been recarved (fig. 154). Printing is done only with vegetable dyes but the indigo resist process has not yet been tried. Since most of the ingredients required for vegetable dyes are also necessary for indigenous medicines, it is not difficult to procure the basic raw material. Only Jajakku leaves *(Memecylon edule)* are procured from Vijayawada. During the initial stages the unit has secured the services of a vegetable dyer with experience of Masulipatam kalamkari. Several difficulties are being faced. The preparation of vegetable dyes poses many problems, and mastery over techniques of printing can largely be achieved by practice. There is, however, a great will to succeed and doubtless these difficulties will be overcome. A more real problem is that of finding adequate washing facilities for the processes requiring running water in vegetable dyeing. Tank water is not suitable as there is no flow. Solutions to this could point to ways in which similar problems could be surmounted should vegetable printing units come up in other urban settings.

[3] *See Supra, Chapter Two, note 19.*

◆ Fig. 156.

Fig. 156. Circular table cloth with Ras-Lila theme. Courtesy, Shri Gourappa Chetty, Kalahasti.

Fig. 157. Hanging bolster *(thombai)*, used as decoration on festive occasions in temples. Also used as part of decorative paraphernalia of temple carts.

Fig. 158. Ornate fan in kalamkari. Street scene at Kumbakonam.

Fig. 159. Figurative and animal designs. Courtesy, Shri S.M. Radhakrishna Naidu, Sickinaikkenpet, Tamil Nadu.

Fig. 160. Bedspread dyed in Kodali Karrupur. Private collection of Shri K.C. Periyakulandai Raja, Zamindar, Udaiyarpalayam, Tamil Nadu. Courtesy, Shri K.C. Periyakulandai Raja. The clarity of red in this plate may be contrasted to the turgidity of the same colour manifest to a large degree in contemporary products of Kalahasti.

Fig. 157.

Fig. 158.

Fig. 159.

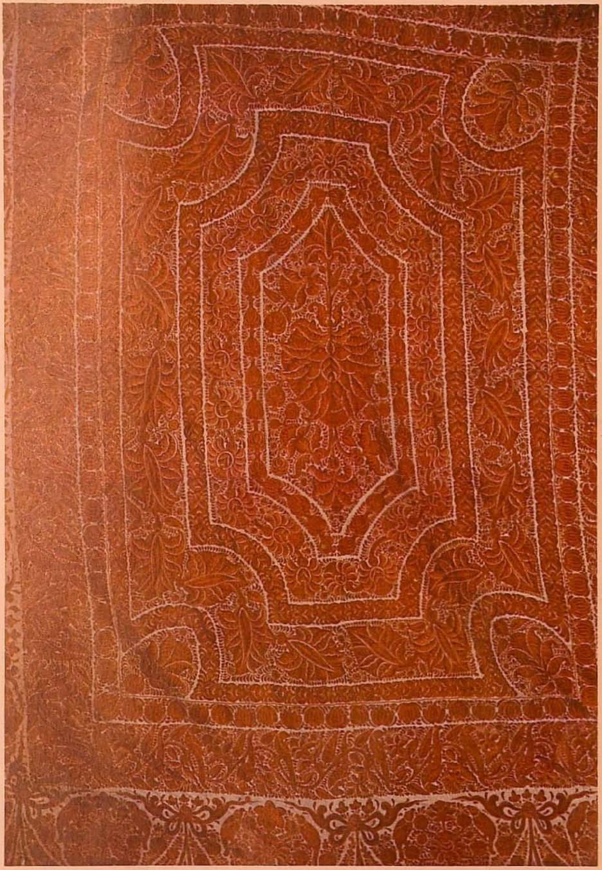


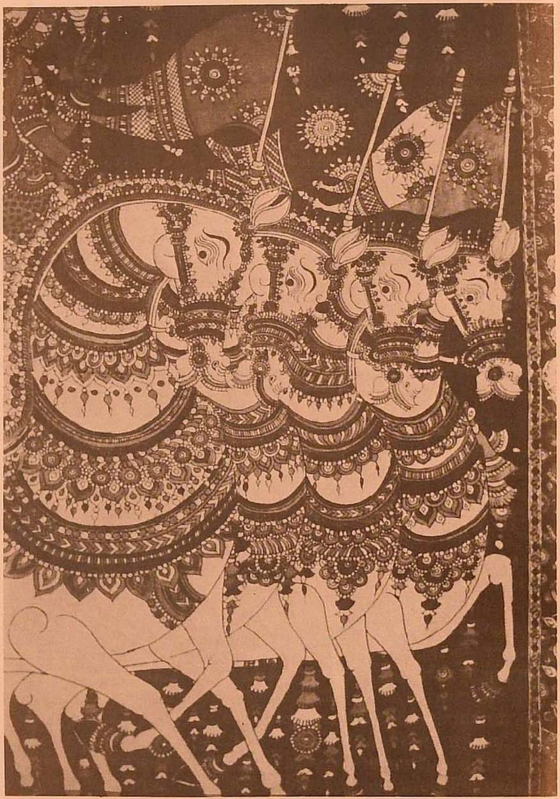
Fig. 160.

CHAPTER FOUR

Painting of Figurative Designs at Kalahasti in Present Times

Techniques and Processes

The Tanjore Tradition

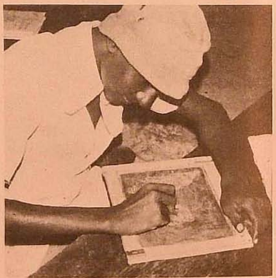


▲ Fig. 162.

▼ Fig. 161.

▼ Fig. 163.

▼ Fig. 164.



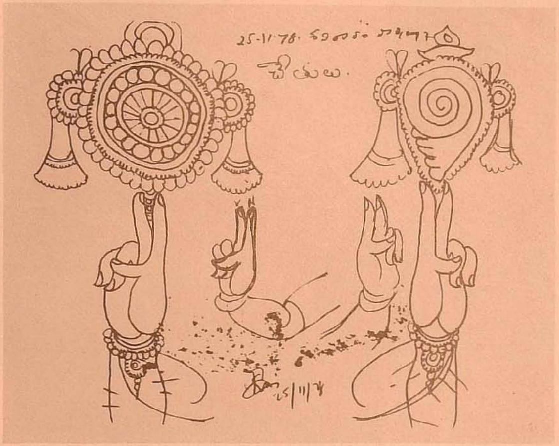


Fig. 165.

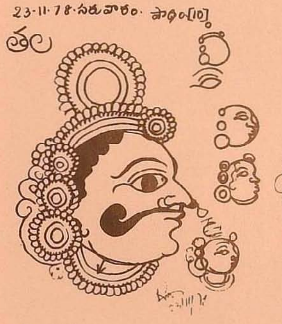


Fig. 166.

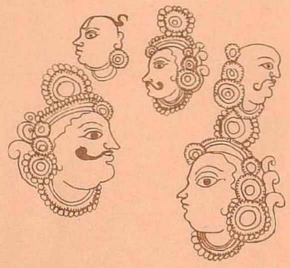


Fig. 167.

Fig. 161. Courtesy, Kalamkari Training Centre, Panagal, Kalahasti.

Fig. 162. Detail of fig. 161.

Fig. 163. Training in outline drawing. Kalamkari Training Centre, Panagal, Kalahasti.

Fig. 164. Student at practice on slate. Kalamkari Training Centre, Panagal, Kalahasti.

Fig. 165. Taken from a student's note-book. Kalamkari Training Centre, Panagal, Kalahasti. Upper row shows Vaishnavite symbols while lower line shows sketches of fingers.

Figs. 166, 167. Taken from same source as fig. 165. Outlines on right hand margin of fig. 166 show progression in outlines for delineation of head. Fig. 167 shows stages in depiction of ornamentation.

PAINTING OF FIGURATIVE DESIGNS AT KALAHASTI IN PRESENT TIMES

The figurative tradition which formed such a strong component in the seventeenth century kalamkari has continued into modern times in these regions. During the difficult intermediary period it had been kept alive by the patronage of temples, local royalty (fig. 152) and rich land holders. The increasing hold of government on all nuclei of privilege in contemporary times, has resulted in the gradual elimination of this class. The firm of M/s. Kishinchand Chellaram which had provided a marketing outlet in Madras had withdrawn from this line after 1935. Since the themes are mythological it is more difficult to provide new usages in an increasingly secular environment. The degree of artistry required for pen drawing is much greater than is the case in block printing. While individual pieces may achieve high standards (figs. 150, 161, 162), the general level leaves much to be desired.

Kalahasti emerged as an important centre for figurative kalamkari after the second half of the nineteenth century. Oral tradition points to the possibility that artisans from the Masulipatam region may have started the activity at Kalahasti[1]. The water of the river Swarnamukhi proved very favourable for dyeing operations. In 1958, the All India Handicrafts Board established a Pilot Production-cum-Training Centre at Panagal, Kalahasti (figs. 163-167)[2]. In 1962, the centre was handed over to the State Government, Andhra Pradesh. On March 1,

[1] *See Census of India, 1961, Vol. II, Part VII A, Selected Crafts of Andhra Pradesh, p.39.*

[2] *The teaching programme at the Kalamkari Training Centre provides an indication as to the craft content of this occupation.*

First three months: The master craftsman or his assistant draws various mythological characters with associated vahana, details of dress, ornamental border patterns and animal forms. The students copy these on slates and keep up practice.

Fourth to sixth month: Drawing practice on paper, initially with pencil and then with ink.

Seventh to twelfth month: Students practice outlining with kalam. The master craftsman prepares an outline sketch in charcoal. Students go over this with iron and alum mordant.

Thirteenth to fifteenth month: Students practice outline drawing with charcoal. Master craftsman corrects these when required. The students then go over their own outlines with iron and alum mordant.

Sixteenth to eighteenth month: Students go over all processes. Master craftsman gives individual attention.

It is obvious that only the technique can be learnt within a period of eighteen months. To evolve new designs, achieve proper balance and gain insight into colour harmony, it would require a much longer period of apprenticeship. It has also to be remembered that the earlier caste pattern has fragmented and newer entrants come from totally different backgrounds in which they have had no previous exposure to the craft.

▲ Fig. 168.

▼ Fig. 169

▲ Fig. 170.

Figs. 168-170. Courtesy, Shri Gourappa Chetty, Kalahasti.

1976, due to managerial problems and the losses being incurred, the centre was closed. It was restarted on September 19, 1976, but clearly on the basis that it was to function as a training school and not as a production centre. It has now been placed under the State Department of Industries, and every two years six males are selected for training. The tradition is growing and the induction of new practitioners is assured.

The work has, however, tended to become stereotyped. If craftsmen were exposed to the full richness of design in temple decorative art, there would be great scope for innovative improvement in design. Since the tradition of mural paintings in temples with a running descriptive script has been incorporated into Kalahasti kalamkari (cf. figs. 168-170 with 70), some interaction with scholars who are well conversant with Sanskrit, Telugu and Tamil literary tradition would be very desirable. There is also need for more research into vegetable dyes so that the discordance now apparent, particularly in the blues and greens, can be corrected and made more harmonious.

TECHNIQUES AND PROCESSES

Although there are many similarities in work practices between Masulipatam and Kalahasti, there are also several dissimilarities. Since there is total reliance on the pen at Kalahasti, the processes are probably more analogous to those of the seventeenth century than current block printing procedures of Masulipatam. The use of the transfer technique as an alternative to charcoal outlines is unknown. Since application of mordant is done entirely by pen, no admixture of gum is required as at Masulipatam.

The practice of painting leads to an emphasis on certain modes and procedures. In simulation of pigment painting the colouring matter is allowed to concentrate on one surface of the fabric rather than permeating through to the other side as is in evidence when mordants are printed prior to the dyeing process. It was noted at Masulipatam that the addition of buffalo milk to starch with which the material was processed prior to the painting of yellow helped to preserve clarity in outline of the painted dye. This conservation of outline is even more important at Kalahasti where all the work is done with kalam. It is for this reason that the elaborate wringing procedure (see fig. 194) has been devised. If the fabrics were allowed to drip, the fat content would also be drained. The wringing procedure ensures expulsion of moisture with conservation of fat content.

Another noticeable feature is the absence of indigo resist processes and dependence on synthetic indigo. Indigo dyeing was discontinued between 40 and 50 years ago. The colour secured from synthetic dyes can be made to approximate vegetable colours, but the necessary expertise has to be acquired. This skill has not been made available to the local dyers. Kalahasti blue tends to be light and is out of tune with the range of vegetable colours, and this, in turn, is reflected in the green. Although madder is preferred for securing red, very few master craftsmen are able to get clear tonal shades[3]. There seems little advantage in abstention from alizarin unless substantial improvements can be made in madder dyeing.

In describing techniques and processes the format chosen for the Masulipatam area will be repeated. The preparatory steps will be outlined followed by a description of the actual procedure of painting and dyeing.

The participants in Kalahasti kalamkari can be divided into different categories. The employer is called the *shahukar*. He may be a master craftsman or a businessman. If the latter, he should really employ a master craftsman to direct the work, but the majority prefer to avoid such expenditure. Artisans who can make outline drawing in charcoal and mordant have a slightly higher status than those unable to do so. Those who fill in colours and perform other associated tasks are called jobbers. Washing and bleaching are done by washermen *(dhobis)*. Since dunging is involved the latter used to have a slightly lower status, but it is noticeable now that jobbers who may belong to a caste other than traditional washermen may help in this process without any feeling of associated loss of ritual purity. Most of the preparatory activities are performed by master craftsmen, artisans, jobbers or their respective family members.

Making of Charcoal Pencils, Kalam and Myrobalam Paste

Tamarind twigs are collected. These are usually available from nearby trees. If they are purchased, a large bunch usually costs about 50 paise. Charcoal made from these would last about three to four months.

The tamarind twigs are burnt in the open (fig. 172). The fire is frequently poked to make sure that all pieces are evenly burnt. When the twigs are half burnt and have blackened, the fire is extinguished with sand (fig. 173). Enough sand is poured so that all the twigs are covered. This serves to cool the twigs.

[3] *For an example of the clear tone in red achieved in earlier times, see fig. 160.*

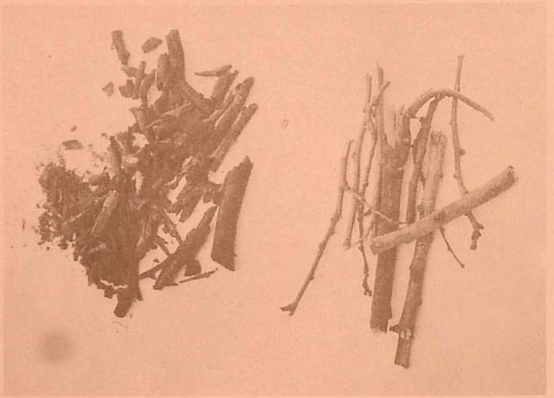


Fig. 171.

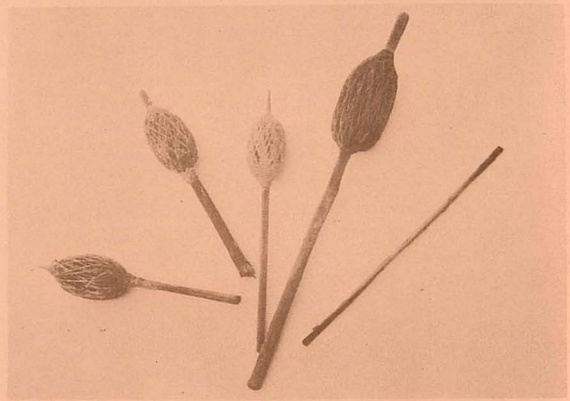


Fig. 176.

Fig. 172.

Fig. 173.

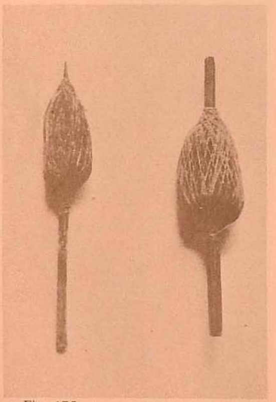


Fig. 175.

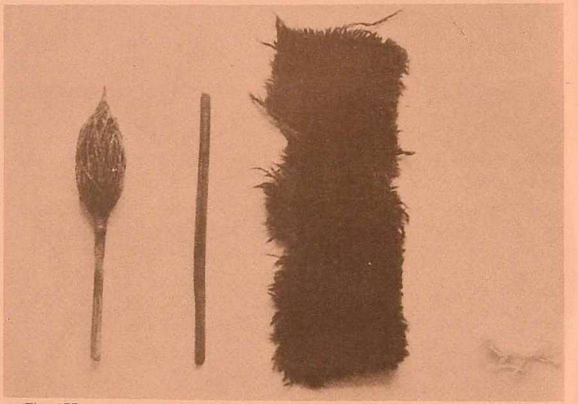


Fig. 177.

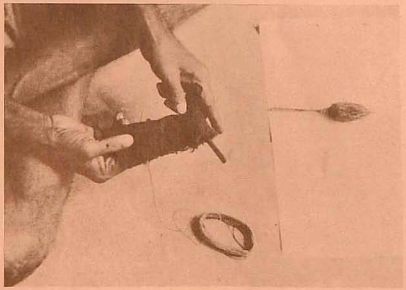


Fig. 174.

Fig. 171. On the right unburnt tamarind twigs may be seen while those to the left represent the ones changed into charcoal.

Figs. 172, 173. Conversion of tamarind twigs into charcoal.

Fig. 174. Pen in course of fabrication.

Fig. 175. On the left is the sharp pointed pen used for outlining in iron acetate. On the right is the broader tipped one used for purposes of filling in with mordant or colour.

Fig. 176. Assorted pens of varied thicknesses. On the extreme right is the bamboo base of the pen.

Fig. 177. Materials required for fashioning of pen.

Fig. 178. On the left is the grinding stone, in Telugu *rolu*, on the right the *potram* or grinder.

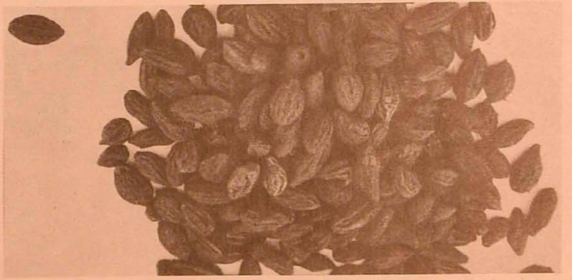
Fig. 179. Consistency of myrobalam paste.

Fig. 180. Unripe myrobalam fruit after sun drying.

Fig. 178.

Fig. 179.

Fig. 180.



Later, the twigs which have been converted to charcoal are retrieved (fig. 171).

This work is done either by artisans, jobbers, or their children. No payment is involved.

Two types of pen are made: sharp tipped ones for outline drawing and broad, round tipped ones for filling in (figs. 175, 176) with mordant. The broad tipped kalam has a fibrous edge. This is made by holding the pen against some hard surface and hitting it with a stone.

Bamboo sticks 20 cm in length and 6 mm in breadth are made with the chosen tip. At a distance of 2.5 cm from the tip a small piece from a woollen rug is wound and held in place with thread (figs. 174, 177). For each solution used, either a new kalam is employed, or the woollen portion is removed, washed and rewound around the pen. The kalam may be prepared either by the master craftsman or the jobber.

For 10 m of cloth, 250 g dry myrobalam, 1½ litres buffalo milk and 3 litres of water are required. Myrobalam is cheaper at Madras and annual stocks are purchased from there. Unripe fruit is selected for drying as these have a higher pulp content and are thought to yield a deeper colour. The fruit is dried in the sun for a little over a month, the colour changing to black during the process (fig. 180).

Myrobalam is soaked overnight in water. The following morning it is ground on the grinding stone *(rolu)* which is imbedded in the ground. The grinder is called *potram* (fig. 178). During grinding a little water is added and a thick paste is made (fig. 179). If a large quantity of paste is required, myrobalam may be powdered at a mill. This is not really desirable as alien elements may be introduced. The proportions of ingredients used remain the same whether mill pounded or hand ground myrobalam is used.

Preparation of Iron and Alum Mordants

For making an outline approximately 20 to 25 m in length the ingredients required are 100 g standard jaggery, 50 g palmyra jaggery, 3 litres water, and 500 g rusted iron fragments. Standard jaggery, palmyra jaggery and rusted iron are bought at the local market at Rs 2 per kg, between Rs 4 and 4.50 per kg, and 80 paise per kg, respectively. The rusted iron is washed if dirty, but no attempts are made to remove rust. According to oral craft tradition, rust hastens the process of fermentation.

A clay pot is filled with water. Clay is preferred as it ensures

Fig. 181.

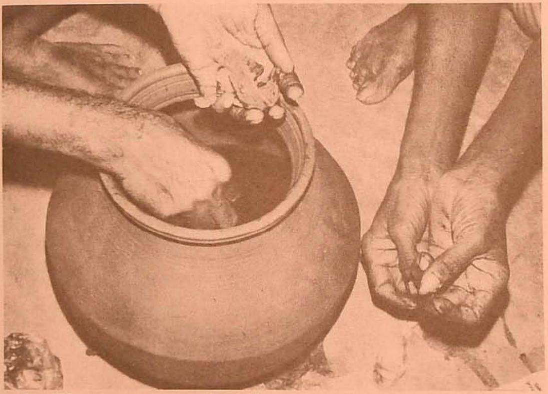


Fig. 182.

Fig. 183.

Fig. 184.

Fig. 187.

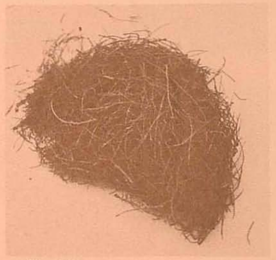


Fig. 185.

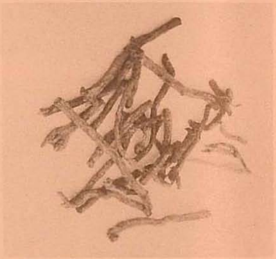


Fig. 188.

Fig. 186.

Fig. 189.

Fig. 181. Two kinds of jaggery required for fermentation in formation of iron acetate.

Fig. 182. Addition of rusted iron filings to clay pot.

Fig. 183. Grinding of alum. Cf. fig. 114. This is indicative of the relative differences in scale of manufacture between Kalahasti and Masulipatam. The latter centre has to cater to a larger market, hence larger quantities of mordant have to be made.

Fig. 184. Constitution of alum in small quantity in an enamelled mug.

Fig. 185. *Pọbbaku (Narigama ạlta).*

Fig. 186. *Surruduchakka (Ventilago madraspatana).*

Fig. 187. *Chevallikodi (Oldenlandia umbellata).*

Fig. 188. *Manjistha (Rubia cordifolia).*

Fig. 189. Myrobalam flower used in yellow dye.

Fig. 190.

Fig. 191.

Fig. 192.

Fig. 193.

Fig. 190. Measurement of powdered myrobalam.

Figs. 191, 192. Stages in making powdered myrobalam flower solution.

Fig. 193. Pomegranate rind for yellow dye.

that no stray metal pieces will enter the solution. Both varieties of jaggery are manually dissolved in the water (fig. 181). The rusted iron filings are added (fig. 182), and the pot is then covered and made air tight.

After 15 days the solution is ready for use. The undissolved iron filings need to be removed within 30 days as otherwise the solution would become too thick. The prepared solution is light brown in colour and can be used for a period of six months. It is customarily prepared once every two or three months.

Alum is usually purchased at Madras where it is cheaper. For filling in approximately 10 to 15 m of cloth, 100 g of alum to 1 litre of water are required. Alum is ground on a stone mortar (fig. 183). It is mixed with water preferably in a clay pot (fig. 184). The solution can be used for one or two months. In case of evaporation, alum particles can be reconstituted by the addition of water.

Both the iron as well as the alum mordants can be made by jobbers, or family members of master craftsmen.

Dyes for Red and Yellow

The ingredients used are *Pobbaku (Narigama alta)* (fig. 185), *Surruduchakka (Ventilago madraspatana)*, a bark (fig. 186), and *Chevallikodi (Oldenlandia umbellata)* (fig. 187). Pobbaku acts as a carrier and also has cleansing properties. Earlier, *Manjistha (Rubia cordifolia)* (fig. 188) was used. Due to its high price, Rs 60 per kg, Manjistha is substituted by Chevallikodi, which had earlier been referred to by the Europeans as *Chayroot*. One of the reasons for the present turgidity in red may be some disproportion in the amount of Surruduchakka added. Surruduchakka, which has a basic brown colour, is used to darken the shade of red. It is added to impart depth to Chevallikodi which yields a light red shade on its own. Surruduchakka and Chevallikodi are bought at Madras where these are available at Rs 6 and Rs 10 per kg, respectively. Pobbaku grows in the river bed at Kalahasti during the summer months when the water level is low. It is available at Re 1 to Rs 2.50 per kg.

Surruduchakka and Chevallikodi are brought in bulk to last for six months. They are powdered separately at the local flour mill. This is not desirable for reasons which have already been stated. The most efficacious method is that of pounding in a stone mortar with a wooden pestle.

For 6 m of cloth the ingredients required are 50 g Pobbaku,

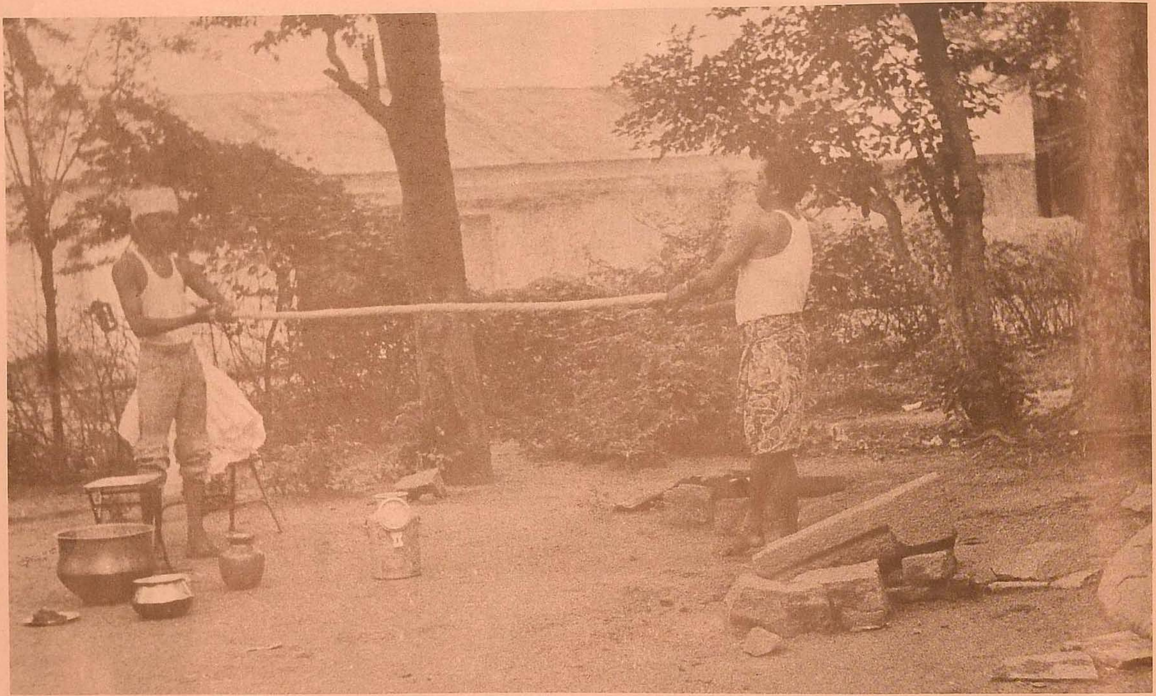
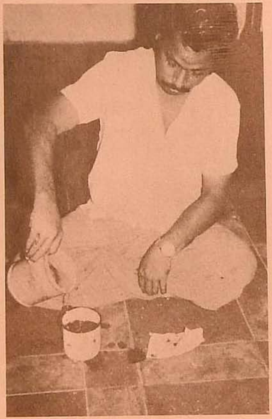
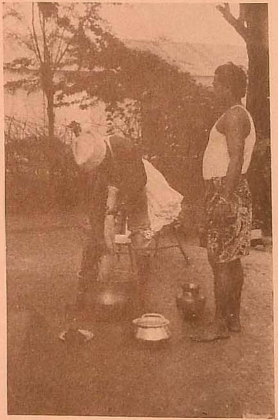


Fig. 194. Fig. 195. Fig. 196. Fig. 197.

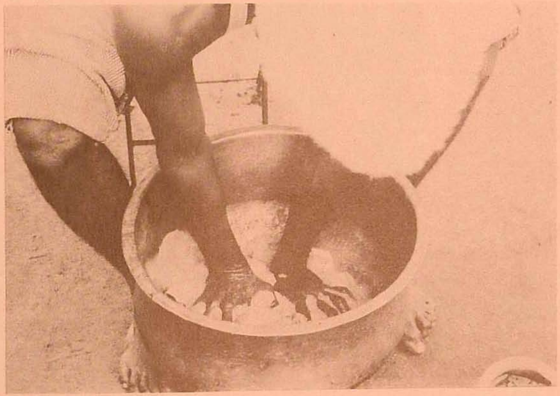




Figs. 194, 197, 199. Dipping, squeezing and wringing of cloth in myrobalam solution for tanning.

Fig. 195. Preparation of chemical blue dye.

▲ Fig. 198.



▲ Fig. 199.

Fig. 196. Mixing fresh buffalo milk with myrobalam paste diluted with water.

Fig. 198. Removal of foam after addition of alum to cooled solution of powdered myrobalam flower.

250 g Chevallikodi, and 250 g Surruduchakka. Since the actual mixing of the ingredients is integral to the dyeing process this will be described at a later stage.

The ingredients used are 150 g myrobalam flower (fig. 189), 1 litre water and 25 g alum. The myrobalam flower is purchased at Madras at Rs 9 per kg.

A clay pot with a small mouth is chosen. Clay is preferred to metal. The water is set to boil. The myrobalam flower is powdered and added (fig. 190). The mixture is stirred well (fig. 191). When boiling point has been reached the fire is extinguished. The solution is left overnight to cool (fig. 192). The particles of myrobalam flower settle at the bottom. The next day, alum which has been powdered, is stirred in and mixed well. The foam which forms at the top is removed (fig. 198). Alum is added to fix and brighten the colour when applied.

The master craftsman supplies all the material and the dye is usually prepared on the work premises by jobbers.

If a darker yellow is desired, an extract of pomegranate rind may be used (fig. 193). The cost of pomegranate rind at Madras is Rs 5 per kg and 40 to 50 m of cloth can be processed with the extract of 1 kg of rind. The process for making a solution from the extract is the same as that for myrobalam flowers. Alum has to be added in the same way to ensure fixing of colour.

In earlier times a more pleasing shade of yellow was secured at Kalahasti by the superimposition of mango bark extract on the myrobalam flower dye.

Mango bark, the parings of the immature fruit which are dried *(Mangifera indica)*, was soaked in water overnight. It was then ground and the liquid squeezed out. A little powdered alum was added, and the extract was ready for application. This is no longer done because of the high price of the product.

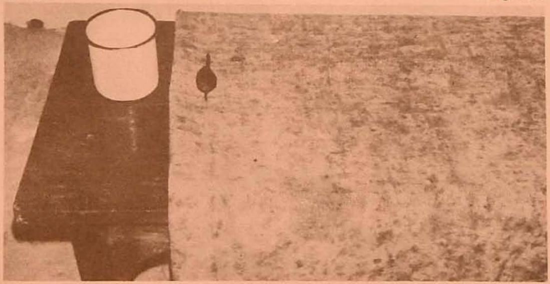
Preparation of Blue Dye

Indigo is not used. Chemical blue known in the market as Bengal blue costing Rs 160 per kg is purchased from Madras. 25 g are stirred into ½ litre of cold water in a clay pot or any metal vessel (fig. 195). This will be sufficient to colour 100 m of cloth in a light shade or 50 to 60 m in a dark shade.

Sometimes 2 to 5 g ultramarine are also added to the solution. Usually a wooden stick is used for mixing as otherwise the colour tends to adhere to the hands.

Fig. 200.

Fig. 201. Fig. 202.



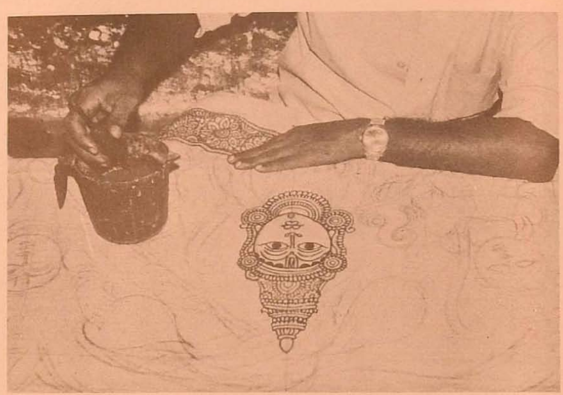


Fig. 203.

Fig. 204.

Fig. 200. Cloth being folded to form creases along which outlines constituting the frame of the pattern be drawn.

Fig. 201. Artisan on the left is tracing circle with the help of a metal disc. The craftsman to the right is forming the outline with a charcoal pen.

Fig. 202. Work bench of artisan.

Fig. 203. Outlining pattern with pointed kalam dipped in iron acetate on charcoal drawn contours.

Fig. 204. Alum painting.

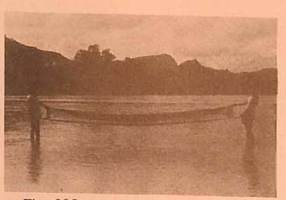


Fig. 205.

Fig. 208.

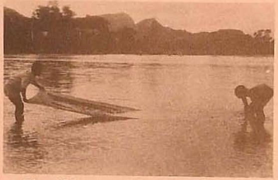


Fig. 206.

Fig. 209.

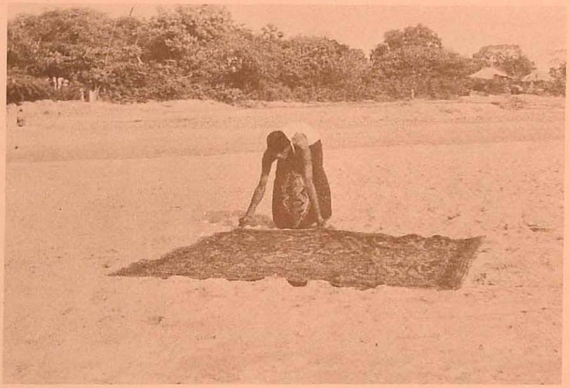


Fig. 207.

Figs. 205, 206, 208, 209. Washing in river for removal of excess mordant.

Fig. 207. Drying of fabric weighted down with sand.

The dye is customarily prepared on the work premises of the master craftsman. It is then taken out for use in small mugs. On occasion it is made by the jobber from material provided by the master craftsman.

The preparatory stages have been enumerated. The actual method of painting will now be described. The painting can be done directly at floor level or on a raised platform as for printing.

Washing of Cloth and Process for Myrobalam

Thick unbleached cloth called *gadha* is preferred. The cloth is washed in the running water of the river for removal of starch. This is done by washermen who are paid 10 paise per metre.

A handful of myrobalam paste is mixed with 1 litre of water in a large vessel. Some of the buffalo milk (¾ to 1 litre) is now added (fig. 196). Fresh buffalo milk is used as the fat content of fresh milk is higher than that of boiled milk. This process is accomplished in the morning hours before the milk can curdle. The same timing is followed whenever buffalo milk has to be used.

The washed fabric is opened and loosely folded to permit easy permeation of myrobalam. The cloth is slowly immersed in the solution (fig. 197). It is opened up part by part and soaked again, this time being additionally pressed down with the hands. The pressing helps greater absorption of the buffalo milk. This is continued for five minutes (fig. 199).

The cloth is taken out, squeezed (fig. 194) and opened. The thick particles of myrobalam found adhering to the cloth are removed. The cloth is again twisted and squeezed. The process of opening, folding and twisting the cloth is repeated again, but this time the twisting is done in the opposite direction.

The cloth is kept on a line until all pieces have been processed. They are then spread out to dry in the sunlight. Additional quantities of myrobalam paste and buffalo milk are added from time to time to maintain balance in the solution.

The squeezing motion helps to spread out the fat content of the buffalo milk. The fat holds the colours on the surface and prevents them from spreading. This effect on the fabric lasts for one month.

Myrobalam process is usually done by jobbers who are paid at the rate of Re 1 per litre of milk used. Six metres of cloth can usually be treated from 1 litre of milk. The labour charge would work out to 15 paise per metre.

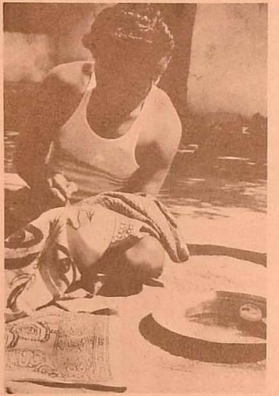


Fig. 210.

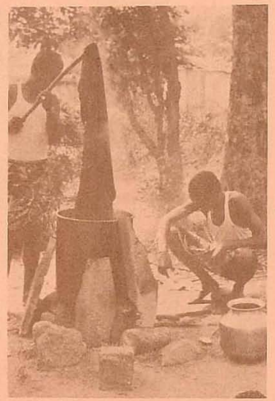


Fig. 214.

Fig. 217.

Fig. 211.

Fig. 212.

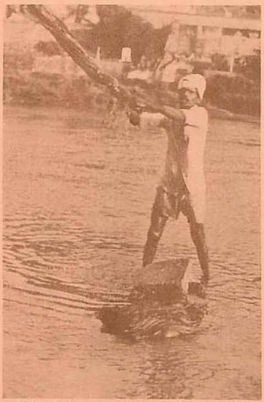


Fig. 215.

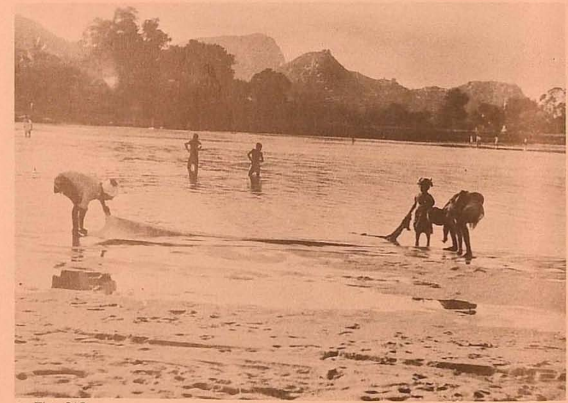


Fig. 218.

Fig. 213.

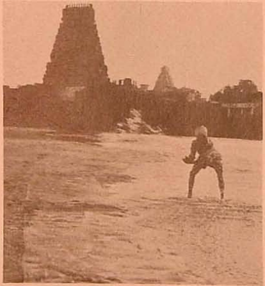


Fig. 216.

Fig. 210. Removal of smudged mordant by squeezing juice of fresh lime on the affected parts.

Fig. 211. Washing in the river on completion of boiling process. Note stones on which the cloth is beaten.

Fig. 212. Materials used in bleaching process. The dung has been placed to the left of the pot.

Fig. 213. Material being rolled up for overnight storage on completion of process of dung application.

Fig. 214. Boiling in madder.

Fig. 215. Washing of material to remove dung.

Fig. 216. Splattering of material with water.

Fig. 217. Water being brought from the river in the folds of cloth for wetting sand.

Fig. 218. Material being spread out on wet sand.

Outlining and Painting Methods

The cloth is folded and pressed (fig. 200). Straight lines are drawn in charcoal along the creases formed. This defines the decorative panel within which the main theme will be drawn. The charcoal stick is held between the thumb and forefinger. The other fingers run along the crease, providing movement and support.

In outlining the main theme, the leading figures are sketched first, followed by the others. Sometimes compass and scales may be used, but the master craftsman needs no aids (fig. 201). The work is done only by skilled male artisans.

The charcoal drawing provides the basic layout. All details are subsequently filled in by pen.

Procedures for Washing, Boiling and Milk Soaking

A woollen blanket (fig. 202) about 150 × 100 cm is spread on a wooden table approximately 150 cm long, 35 cm high and 38 cm wide. This provides a smooth work surface and also absorbs colour seeping through to the reverse side. The myrobalam processed cloth on which charcoal outlines have been made is placed on it. The iron mordant is kept in a mug. The pointed kalam is used to make outline drawings and other line details (fig. 203). Usage is similar to that practised for application of yellow colour at Masulipatam. Excess mordant is wiped away with a damp cloth, apart from being absorbed by the felt of the pen as at Masulipatam. If larger areas in black are desired, the second pen with the broader tip is used. The depiction of black coloured background is a response to modern taste.

The drawing of outline in charcoal and iron acetate is done by master craftsmen or trained artisans. The latter have to keep their own supplies of charcoal sticks and kalams, the charges of which do not enter into the cost structure. The average payment for drawing details in iron acetate is Rs 2 to Rs 10 per metre. If the work is of a high standard payment may go up to Rs 20 per metre.

The procedure followed is the same as for iron acetate. Unlike the procedure associated with Masulipatam, alum mordant is not distinguishable by the admixture of a fugitive tint. When alum is painted on the myrobalam treated cloth, a faint green hue emerges (fig. 204). This follows from the reaction of tannin with alum and is not permanent. It denotes the fixing of alum. Since alum is usually used for filling in purposes, the pen used is the broad tipped one. It is held in the same manner as at Masulipatam for painting yellow. There is more frequent recourse to the damp cloth for blotting purposes. The mixing of alum and iron acetate mordant to obtain brown, in evidence at Masulipatam, is not practised at Kalahasti.

Filling in with the broad tipped pen is an unskilled job. Some master craftsmen pay for each application separately. Rs 2 per metre would be paid for two applications of alum. Others pay a standard rate of Rs 4 per metre which would include two applications of alum, one of yellow and one of blue.

This operation has to be accomplished very skilfully so that there is no smudging of mordant. The fabric is taken to the river. It is opened out (fig. 205) and held in the flowing water by two persons holding either end (figs. 206, 208). There should be no overlapping of fabric. It is kept in this position in the river for about five minutes. It is then lifted out, shaken thoroughly (fig. 209) and dipped back into the water. By this time the excess mordant would have been swept away in the flowing current.

The fabric is then squeezed. The dipping and squeezing procedure are repeated two to three times. All impurities are removed, and unevenness in mordant painting neutralised by these actions.

The cloth is finally squeezed, opened out and dried on the river bank. It is weighted down by sand so that it is not blown away (fig. 207). After drying, it is folded and taken to the establishment.

The river washing may be done by dhobis, jobbers, or the people who undertake the filling in of painted areas. The payment for 40 to 50 m of cloth is Rs 4 to Rs 5.

Prior to boiling, the fabric is opened out and inspected. If any spreading or blotching of iron or alum mordant is noticed, it is rectified by the application of the juice of raw lemon on the affected areas (fig. 210).

A large open mouthed vessel is filled with sufficient water to soak the requisite quantity of cloth (approximately 6 m). Copper, zinc or brass vessels are used. Copper would be preferable as there would be no admixture of metal to reduce the colour. Earthenware pots are the best but the rate of breakage is high.

Pobbaku is mixed into the water with the hands, and the water is brought to the boil. Powdered Chevallikodi and Surrudu-chakka are added. The mixture is stirred continuously.

The cloth is slowly inserted into the boiling solution. It is moved in and out of the solution with a wooden stick (fig. 214)

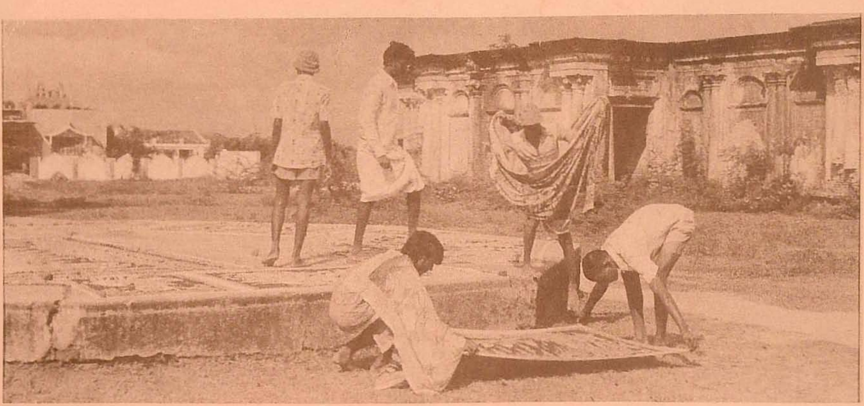


Fig. 219.

Fig. 223.

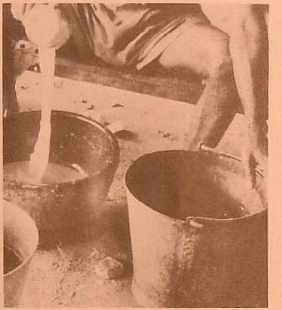


Fig. 220.

Fig. 222.

Fig. 224.

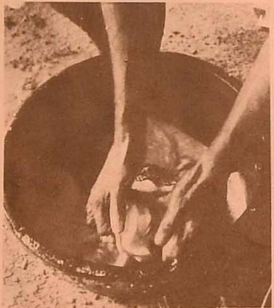


Fig. 221.

Figs. 219-221. Soaking in milk and drying to prepare surface for yellow painting.

Fig. 222. Application of blue colour with kalam.

Figs. 223-225. Paintings at the Nataraja Ranga Salam, outside Sri Kalahasteesvara Temple, Kalahasti.

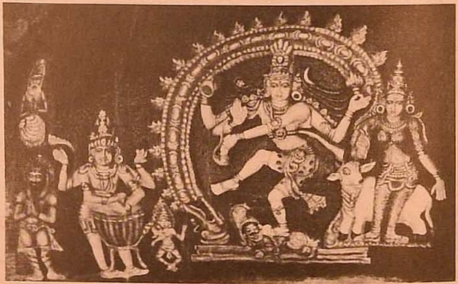


Fig. 225.

until the entire quantity has been put in. The fabric is allowed to remain in the liquid until it boils over. The cloth is taken out, cooled with cold water, taken to the river and washed in the flowing water. At Isfahan, the boiling is done on the river bank of the Zayende Rud, but at Kalahasti it is done on the work premises and then taken to the river. As with alizarin boiling at Masulipatam, the red colour is developed and the black colour is fixed during the boiling. At Kalahasti, material with black filling is boiled separately from that with a dominant red colour.

The work of boiling is done by jobbers. The collective payment for taking the cloth to the river to remove excess mordant, boiling for madder and subsequent washing in the river is Rs 8 for 40 m and Rs 10 for 70 m of cloth. The persisting pattern of pre-industrial craft relations is evident in the fact that on occasion, payment is acceptable in kind in the form of a meal or entertainment at the local cinema.

After washing in the river, the cloth is spread out on the wet sand of the river bed for a few hours. At intervals water is sprinkled on it to keep it wet. It is squeezed and beaten on the stone to remove the fugitive colour (fig. 211). This is done twice. It is then wrung out and dried on the wet sand. If a second boiling in madder is not required, the cloth is put through the sheep dung bleaching stage.

If a deeper shade of red is required, the processes of myrobalam and alum application, washing in river for removal of excess alum, boiling in madder and washing and drying in the river are repeated for a second time.

During the madder process, there is some spreading of colour on to areas which have not been treated with alum. This light tint of colour has to be removed before application of yellow and blue. For bleaching purposes either sheep dung or cow dung may be used. Sheep dung is more effective as it contains a higher proportion of sodium carbonate. A canful of sheep or cow dung can be purchased from the local shepherd for 50 paise to Re 1.

A handful of dung is mixed in enough water to bleach 10 m of cloth. The mixture is kept in a clay pot (fig. 212). The cloth is dipped in this solution, taken out, squeezed and kept aside. Fresh dung and water are added as required. The material is rolled up (fig. 213) and kept through the night with the dung mixture. The following morning it is taken to the river, beaten and washed in the flowing water (fig. 215). It is dried on wet sand. To keep the cloth wet, water is sprinkled on it every few minutes. The fabric is exposed to the sun in this manner throughout the day.

The steeping in dung, washing and drying on wet sand with continual sprinkling of water continues for four to five days until the non-mordanted portions become white. For half the period the top side of the cloth is exposed to the sun, while for the remaining period the position is reversed. The cloth is kept damp to prevent the red and black colours from fading. Not only is the cloth itself splattered with water from time to time (fig. 216), but the sand on which it is spread is sprinkled before the cloth is laid out on it (figs. 217, 218). Small mounds of wet sand are also heaped along the edges of the cloth.

If the weather is cloudy, the bleaching may take six days. The normal time, if cow dung rather than sheep dung is used, is six to eight days. The ideal period is four days after which, despite all care, some fading takes place.

Dung bleaching is usually done by dhobis. Sometimes jobbers or their wives may take up the work. The rate of payment is 50 paise per metre.

The cloth is now ready for yellow and blue painting. The madder boiling and elaborate bleaching procedure result in the removal of all the fat content introduced at the myrobalam stage. This is now rectified.

For 10 m of cloth, 1 litre of buffalo milk sold at Rs 2 per litre is purchased (fig. 220). This is diluted by the addition of a little more than the same quantity of water. The cloth is soaked in this (fig. 221) and wrung out in the same manner as in the mayrobalam process. To ensure quick drying the cloth is spread out in the open (fig. 219).

Smaller quantities are processed by the master craftsman. Larger quantities are given out to jobbers who are paid at the rate of 20 paise per metre.

Application of Yellow and Blue

The yellow used may be the extract of either myrobalam flower or pomegranate rind. It is applied with the round tipped pen in the same way as in filling in with alum. Sometimes yellow is overpainted on red to obtain orange, but this is not a conventional shade.

The work may be done by family members of the master craftsman or given out to jobbers. Jobbers are paid at the rate of Rs 1.25 per metre.

After yellow painting, the cloth is washed in the river as for alum painting and dried on the sand in the same way.

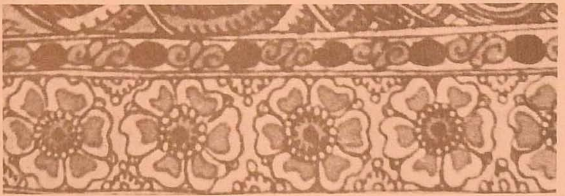
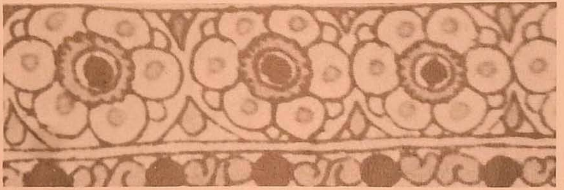


Fig. 226.



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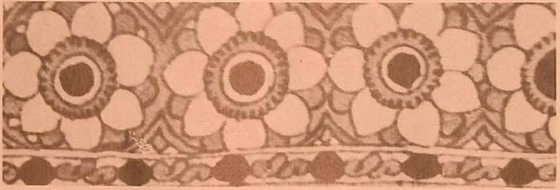

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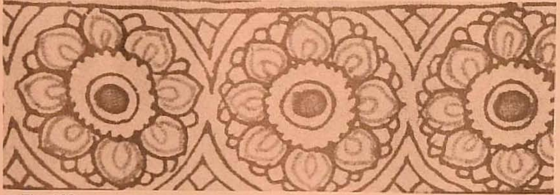

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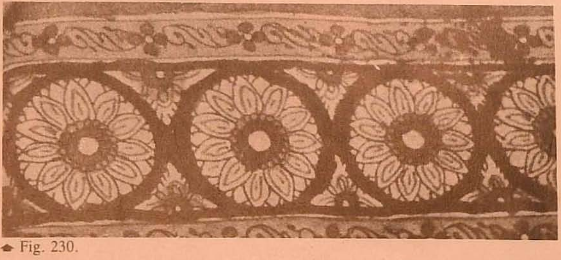

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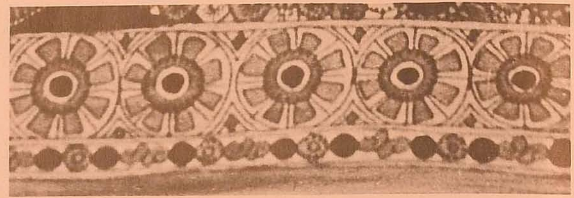

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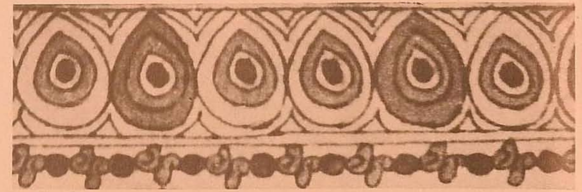

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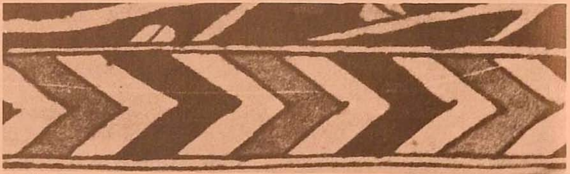

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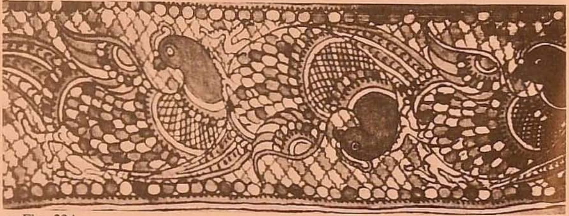


Fig. 234.

Figs. 226-230. Round and pointed petalled lotus flower used in border design.

Fig. 231. *Bandichakram* or cart wheel border design.

Fig. 232. *Tilakam* border design.

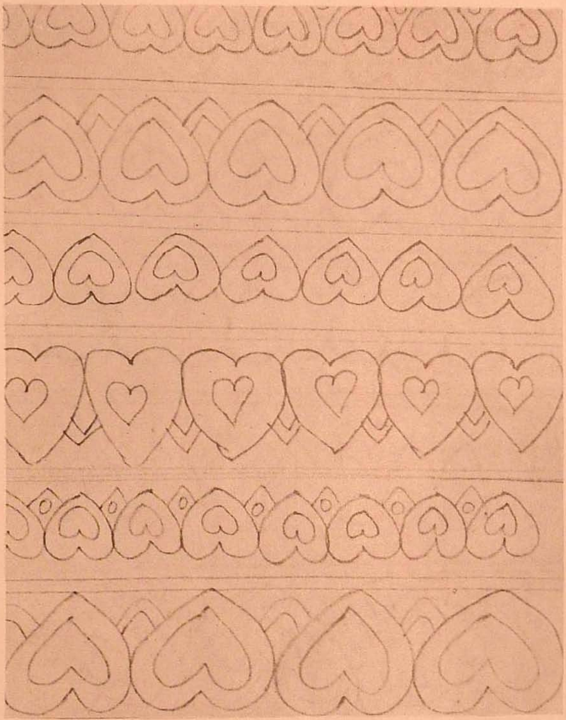
Fig. 233. *Kangora* border design.

Fig. 234. *Chilakalu* or parrot border design.

Fig. 235. *Dha* border design.

Fig. 236. *Tiggalu* border design.

Fig. 237. *Pilli adugu* or cats paw border design.



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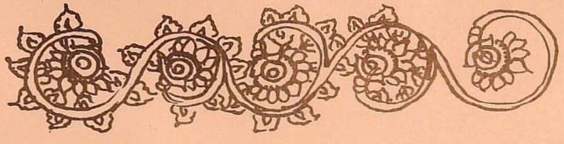
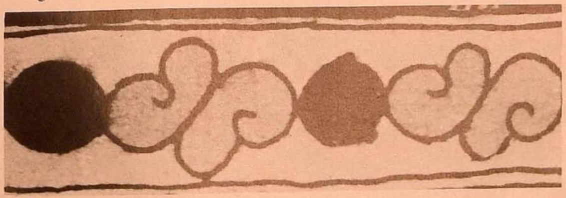


Fig. 236.

Fig. 237.



Blue is painted with a broad tipped pen in the same manner as in alum application (fig. 222). Painted on red it yields violet, painted on yellow it provides green. When indigo dyeing was practised at Masulipatam in the past, the usage was a little different, the yellow being overpainted on the blue. There are slight differences in the resultant shades of green. Violet, like orange, is not a conventional shade. After the application of blue the cloth is washed in the river as after boiling for madder. Excess blue is washed away and all dirt is removed. The cloth is then dried on the sand.

The kalamkari is now ready for sale. It has the same intrinsic flavour as is perceptible in the case of Masulipatam kalamkari.

Select Features in Design

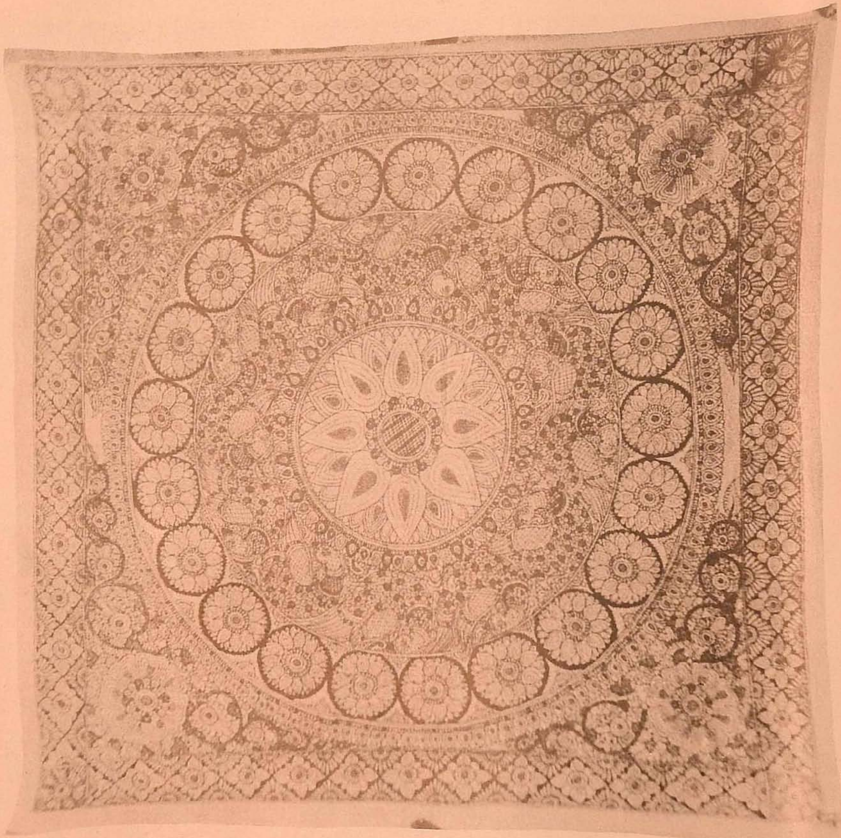
Traditional themes were chosen from the Puranas or epics. These stories were depicted in the form of a series of horizontal panels with the narrative script running through with more important incidents receiving a larger layout. A single familiar episode could also be depicted. At times there would only be the image of a particular god or goddess with the appropriate *vahana* (vehicle). The manual to which craftsmen refer for iconographical detail is the Telugu work, *Paddabalasikha*, by Parrastu Chinnayasuri. A very potent influence appears to have been the paintings executed at the Nataraja Ranga Salam outside the Sri Kalahasteesvara Temple (figs. 223-225).

There is evidence of a certain degree of colour symbolism but adherence is not too rigid. Blue is associated with deities, red with demons. Hanuman is depicted in green. Yellow is used as female body colour and also in simulation of gold ornamentation. Animals and geometrical designs may be traced in black outline against a white background.

The motifs used in the decorative borders are highly conventionalized. These include *kamalam*, different forms of the lotus flower (figs. 226-230), *bandichakram* or cart wheel (fig. 231), *tilakam*, from the tilak outlined on the forehead of orthodox Hindus (fig. 232), *kangora* (fig. 233), *dha*, after the Telugu alphabetical letter of this name (fig. 235), *chilakalu* or parrot (fig. 234), *tiggalu*, interlacing pattern of leaves and flowers (fig. 236), *pilli adugu* or cat's paw (fig. 237). The outermost panel of the border, usually 4 cm in width, is in a plain colour. Previously it was in red. Now there is a preference for yellow.

As at Masulipatam, in response to contemporary taste, black backgrounds are sometimes portrayed. Unbleached backgrounds are made only to specific order.

◆ Fig. 238. ◆ Fig. 239.



◆ Fig. 240.

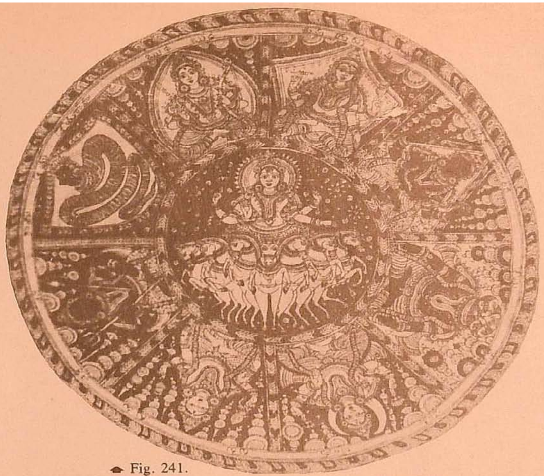
Fig. 238. Theme from Buddhist legend. Courtesy, Kalamkari Centre, Panagal, Kalahasti. Artist, Shri Rambhoj Naik.

Fig. 239. Theme from Buddhist legend. Courtesy, Shri Venkatamuniswamy, Kalahasti. Artist, Shri S. Jagadish.

Fig. 240. Geometrical pattern for table cloth. Courtesy, Shri Gourappa Chetty, Kalahasti.

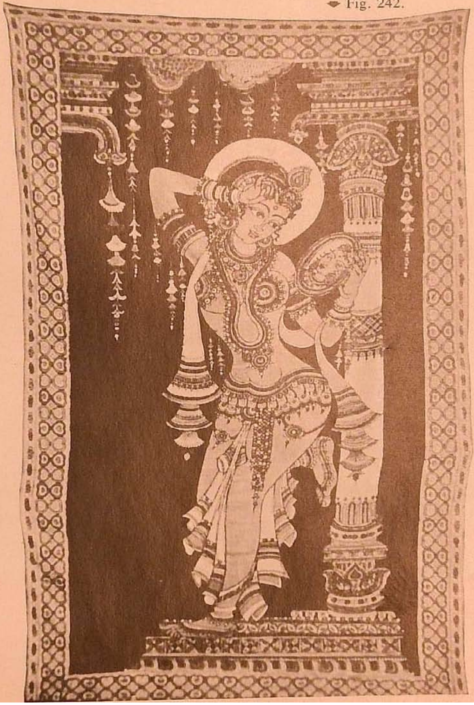
Fig. 241. Courtesy, Kalamkari Training Centre, Kalahasti.

Fig. 242. Ajanta figure in modern art design. Note black coloured background.



▲ Fig. 241.

▼ Fig. 242.



Circular table cloths which originally started with the Ras-Lila theme began to be made 20 years ago (figs. 156, 214). Themes drawn from Buddhist legend constitute another innovation (figs. 238, 239). Geometrical patterns are being devised for decoration in table cloths (fig. 240). Saris are made to specific order. There are also the so called Modern Art designs which include Ajanta figures (fig. 242), Radha and Krishna and other such calendar themes.

Out of the total production, at present only 10% has a domestic market, the rest being exported. Individual craftsmen have no direct marketing channels. They supply to government emporia or post items by V.P.P. to private parties. The major exports are channelised through sales to Lepakshi Emporium, an enterprise run by the Andhra Pradesh State Government. Lepakshi has many branches at the state level. Exports are handled by the Hyderabad and Delhi offices.

The total cost of processing one metre of kalamkari cloth is broken down as under:

	Rs
Cost of unbleached cloth	5.00
Raw materials used in preparatory stages	5.00
Payment to craftsman for drawing outline	15.00
Filling in with colour, myrobalam and other processes, washing, finishing	6.20
Total	31.20

The interest rate on investment is 5 paise per rupee which would work out to about Rs 2 per month on each metre of cloth.

The selling price ranges from Rs 40 to Rs 50 per metre. This would provide a profit margin of between Rs 7 and Rs 17 per metre on an average.

THE TANJORE TRADITION

Attention has already been drawn to the fact that Tanjore was a flourishing centre of kalamkari in the seventeenth century. During the nineteenth and early twentieth centuries not only was traditional kalamkari practised but many newer crafts like printed wax resist, sometimes with a double pointed kalam, and the painted work associated with the village of Kodali Karrupur had developed.

Several temples have very beautiful old canopies and parapher-

▲ Fig. 243.

Fig. 243. Workshop of Shri Gourappa Chetty, Kalahasti. Courtesy, Shri Gourappa Chetty.

Figs. 244, 247. Canopy, detail. Private Collection of Shri K.C. Periyakulandai Raja, Zamindar, Udaiyarpalayam, Tamil Nadu. Courtesy, Shri K.C. Periyakulandai Raja.

Fig. 245. Courtesy, Shri Tarmakdas Kishindas, Hyderabad.

Fig. 246. Courtesy, Government Museum, Madras.

Fig. 244.

Fig. 247.

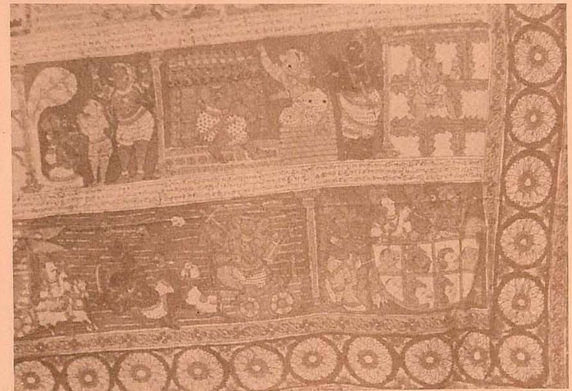


Fig. 245.

Fig. 246.

nalia used for decoration of temple carts[4]. Shrimath K.C. Periakulandai Raja, Zamindar of Udaiyarpalayam, has some very fine bedspreads (fig. 160) and canopies (figs. 244, 247) executed in the Tanjore region.

The existing samples of canopies and other temple paraphernalia show traditions of designs which are quite different from those of Kalahasti. Kalahasti narrative kalamkari approximates more closely to those of the Masulipatam region of the late nineteenth and early twentieth centuries, which perhaps can be taken as indirect evidence of craft linkages (figs. 245, 246)[5].

The characteristic feature of the Tanjore region temple kalamkari is the very pleasing union achieved by balancing the areas of figurative work with those ornamented by decorative design. This may be noted in temple ceilings also, and indeed, the geometrical and floral designs of these ceilings have been carried over into kalamkari. In this context, ceiling designs of the Veerabhadraswamy Temple at Lepakshi, and the fragmentary designs visible at the White Vinayaka Temple, Tiruvalanjoli, merit close study. The figure drawings are not squat and stereotyped as at Kalahasti. The background for the figurative work is not madder red as in the Pulicat figurative work of the seventeenth century, but a chaste white. The floral wreaths and individual blossoms cascade playfully as against the endless rounded outlines, inexpressibly static, sketched in stark black which are the hallmarks of Kalahasti ware (cf. figs. 68, 247 with 243, 248).

The motifs found in the non-figurative panels are duplicated in the hangings (*thombai*) (fig. 157) of temple carts and in decorative fans (fig. 158). For reasons which are not very clear there is a sudden break between the earlier products with vegetable colours, and the later ones which have considerable evidence of synthetic colours, particularly in the reds which do not appear to be based on alizarin. It is difficult to assign choronological limits to the terms *early* and *late* but the dividing line may be placed in the third or fourth decades of the twentieth century.

Today there is only one family practising kalamkari in this region, that of Shri S.M. Radhakrishna Naidu at Sickinaikkenpet, Tanjore district. There is little evidence of vegetable

[4] *Unfortunately there is a tendency to shred the material of old kalamkari and convert it into lamp wicks. All the old kalamkari of Airavatesvara Temple, Darasuram, have been lost in this way.*

[5] *This becomes evident when the kalamkari pieces at the Salar Jang Museum, Hyderabad, are examined. Unfortunately it has not been possible to procure photographs either of the items on display or those kept in the reserve collection of this museum.*

Fig. 248.

Fig. 251.

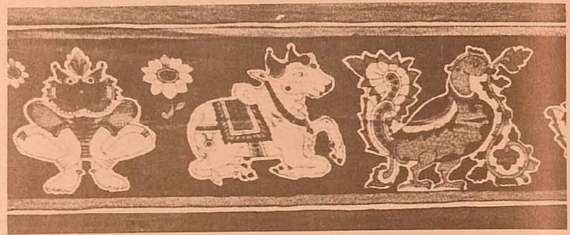


Fig. 252.

Fig. 249.

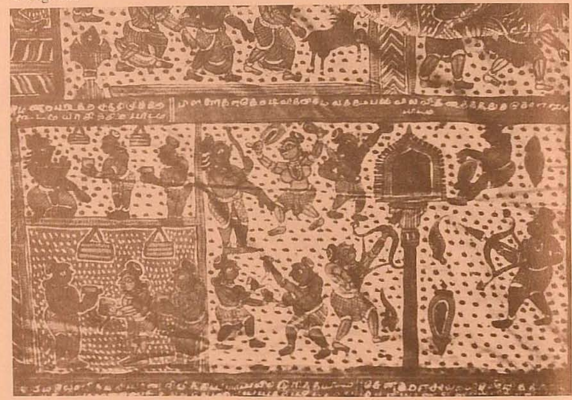


Fig. 253.

Fig. 254.

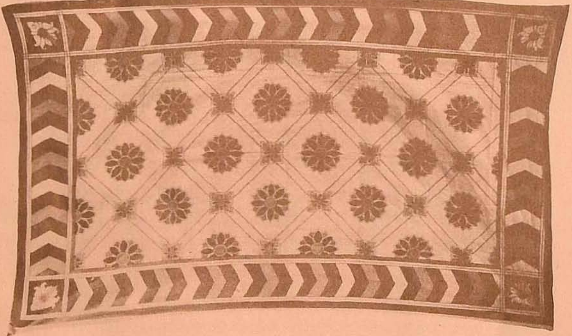


Fig. 250.

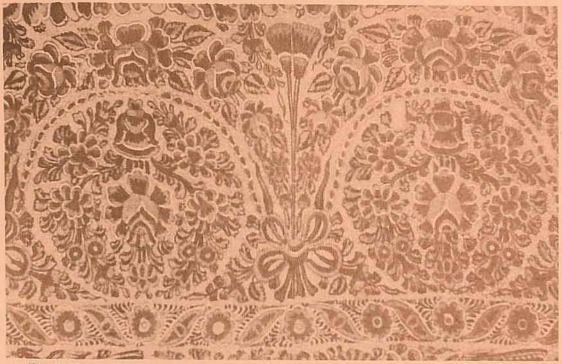


Fig. 255.

Fig. 256.

colours being used. The work is, however, done entirely by hand with the typical kalamkari pen. This is made from the stem of the palmyra leaf rather than bamboo as at Masulipatam and Kalahasti.

The wealth of earlier Tanjore kalamkari is reflected in the motifs selected for this work. The geometrical motifs have been skilfully exploited in designs for decorative panels (fig. 249), bedspreads (fig. 250) and table covers. A great deal of design input is, however, required to improve the visual display of the figurative and animal design work (figs. 159, 251, 252), and the quality and tone of colour. This should not be difficult in view of the rich repertory of source material available from which inspiration may be drawn (figs. 253-256).

Fig. 248. Courtesy, Shri Venkatamuniswamy, Kalahasti.

Figs. 249, 250. Decorative border and bedspread. Courtesy, Shri S.M. Radhakrishna Naidu, Sickinaikkenpet, Tamil Nadu.

Fig. 251. Figurative and animal designs. Courtesy, Shri S.M. Radhakrishna Naidu, Sickinaikkenpet, Tamil Nadu.

Fig. 252. Courtesy, Sri Kashinath Shaiva Matha, Tirupanandal, Tamil Nadu.

Fig. 253. Courtesy, Government Museum, Madras.

Fig. 254. Courtesy, Sri Kashinath Shaiva Matha, Tirupanandal, Tamil Nadu.

Figs. 255, 256. Courtesy, Government Museum, Madras.

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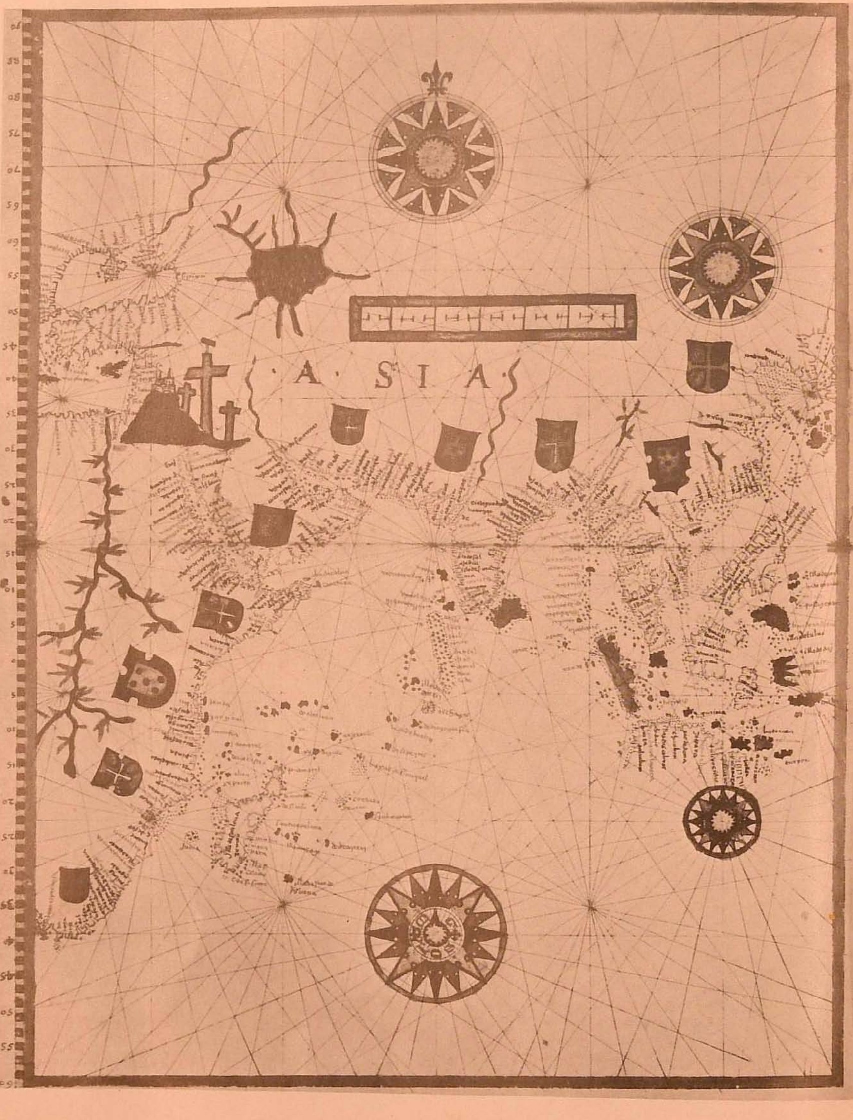

Map of Asia executed in 1573 at Marseilles under the patronage of Cristol Viguié. Courtesy, Bibliothèque Nationale, Fonds Français, 9669, f. 8-9.

CONCLUSION

It had been earlier specified that the aim of the project was that of attempting to analyse how a craft oriented enterprise could be made economically viable in an increasingly industrialised environment. An alternative statement of the problem would be that of trying to analyse how a traditional way of life can adapt meaningfully to challenges posed by technological culture carrying with it an incipient threat of increasing dehumanization. This process of change is inevitable and to jealously exclude all modern innovation from the field of indigenous craft would smack of fundamentalist revivalism, which would, in the long run, prove counter-productive.

Developing societies have demonstrated that accelerated forces of social change lead to conditions of stress and confusion in value systems. These find expression in a fragmentation of cultural life. In such a fluid situation, policies need to be so framed as to strengthen the inner core of craft tradition without cutting it off from the cultural milieu from which it can derive its inspiration and vitality. In the past the pace of transmutation was slow thus allowing for an orderly absorption of new symbols and ideologies. Today the rate of change is so rapid that great strain is placed on the assimilative processes. There is an inevitable deterioration of standards but if crafts are nurtured with due understanding of the compulsive forces leading to innovation, the transition can be tided over without cleavage from past tradition, and there is no reason why craft activities should not measure up to the challenges posed.

At the present juncture, the new consumer culture spread through the multifarious agencies of mass media has led to vulgarisation of taste. The political ideology of democratic socialism, while laudible in concept, has been translated into action without adequate forethought in the field of craft activity. Since the technological inputs in this occupation are of a low order, it is tempting to induct new workers from underprivileged sections of the society on the plea of providing them with a new means of livelihood. In seeking such a solution to problems of caste and economic disparity, the factor which is overlooked is that in the past primitive technology was found combined with a high degree of manual skill and dexterity and the consideration of aesthetic appeal was never overlooked. Training schemes devised for the induction of new entrants into the activity of kalamkari should lay due emphasis on this last factor.

In a multi-faceted society, such as that which exists in India, there is certainly place for labour intensive craft oriented industries carried out in the domestic sector. Not only is there scope for the development of an internal market, but the viability of export demand has been copiously illustrated in recent times. There is, however, great need for intensive research into the field of vegetable dyes to prove or disprove its viability vis-à-vis chemical dyes, as also the strengthening of design input. The infrastructures for both exist but remain largely under-utilised.

Unless action is taken soon there is danger that existing crafts will find themselves cut off from past tradition. Even in the most advanced industrial societies, crafts are nurtured as they serve as links with a living past providing society with a sense of identity. In India, recent developments have greatly eroded this base. The situation needs to be rectified, for, to sacrifice craft tradition at the altar of modernity is tantamount to adding yet another dimension to poverty of the mind.

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NOTE: Please make the following corrections while reading this book. Inconvenience to readers is regretted.

Page	*Place*	*Line*	*Instead of*	*Read*
15	Footnote 1	3	*pp. 66, 74, no.8, 76,*	*pp. 66, 74, n. 8, 76,*
17	Footnote 5	7	***Orientales et la China,***	***Orientale et la Chine,***
26	Illustration 23	(Number)	Fig. 23.	Fig. 28.
26	Caption to Fig. 28	5	The floral pattern to the left may perhaps be identified as *sarassa* while the checked pattern to the right may be placed in the *guingam marchay* category.	Delete this sentence.
27	Illustration 28	(Number)	Fig. 28.	Fig. 23.
30	Caption to Fig. 34	1	Fig. 34 is of special interest. The motif in the outer border was executed exclusively for the Dutch company. There is also a strong Chinese impress on the design outlay.	Fig. 34. Courtesy, Victoria and Albert Museum, London.
37	Illustration 59	(Number)	Fig. 59.	Fig. 60.
37	Illustration 60	(Number)	Fig. 60.	Fig. 59.
37	Text	36	(figs. 31, 65).	(figs. 31, 147).
42	Caption to Fig. 70	5	Cf. fig. 155.	Cf. fig. 150.
47	Caption to Fig. 86	4	The pineapple was introduced to India by the Portuguese. After the fifteenth century A.D., it became a popular decorative motif in India.	Delete these sentences.
65	Text	21	(figs. 145-148, 155).	(figs. 30, 147).
91	Text	2	(figs. 156, 214).	(figs. 156, 241).
93	Text	25	(cf. figs. 68, 247	(cf. figs. 68, 244

About the Author

Dr. Lotika Varadarajan has had a varied background in her earlier years. Having spent her childhood in Shillong, Assam, she continued her higher education at the Universities of Delhi and Bombay, Chulalongkorn University, Bangkok, and Newnham College, University of Cambridge. After obtaining her doctorate she undertook a spell of teaching and research in history at Sophia College, University of Bombay.

In 1976 she was awarded a Homi Bhabha Fellowship, and her research into Indian textile history has continued since that date. She is the author of several publications including *India of the Seventeenth Century*, and *Memoirs of François Martin*, and has been recently elected to the membership of the Société Asiatique, Paris.

About the Book

SOUTH INDIAN TRADITIONS OF

KALAMKARI

In recent times there has been considerable interest in the textiles patterned by vegetable dyes fashioned in the area around Masulipatam and Kalahasti in Andhra Pradesh and Kumbakonam in Tamil Nadu. The tradition goes back to much earlier times when Indian textiles enjoyed great demand in many foreign markets. The author of the present work has attempted to trace this link and survey the industry as a whole. Her suggestions as to how a viable revival can be effected are relevant to other craft oriented activities threatened by increasing industrialisation.

The ground covered will make this work essential reading for the specialist as well as the interested lay reader. Apart from the historical and sociological dimensions, techniques and technology receive in-depth analysis, while the munificent illustrations culled from innumerable Indian and foreign collections make evident the high aesthetic content achieved by Indian craftsmen in the past.